6

MEDICAL REMARKS

ON

NATURAL,

SPONTANEOUS AND ARTIFICIAL

EVACUATION.

BY

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MDCC LXXXVII.

TO

the WORSHIPFUL the

BAILIFFS,

HIGH-STEWARD,

RECORDER,

AND

The other Members of the Corporation

OF

KINGSTON UPON THAMES,

this HUMBLE IMITATION of

Their exemplary Zeal

to promote the Happineſs of Mankind;

IS,

with *all due Gratitude* for

the indulgent Partiality with which They have ever been pleaſed to honour him,

moſt reſpectfully inſcribed by

Their very much obliged, and
devoted humble Servant,

23 *May*, 1787. *JOHN ANDERSON.*

PREFACE.

THOUGH artificial Evacuation be, in many caſes, neceſſary to prevent diſeaſe; or, to precede the uſe of other remedies, for a ſucceſsful cure; yet a too general and implicit compliance with that practice is highly improper: and it is well known, that ſome, by cautiouſly endeavouring to avoid this error, have run into the contrary, which is no leſs prejudicial. We therefore hope that the obſervations contained in the following pages, for PREVENTING the ABUSE and IMPROVING the USE of EVACUANTS, and thus promoting the moſt beneficial purpoſes of the benevolent part of the FACULTY, may not be thought entirely unworthy of THEIR ATTENTION in particular, and that of the PUBLIC in general; for every thing here advanced is deduced from the obſervation and experience of a long and ſucceſsful practice.

Upon the ſame principle for which the liberal Literati of all ages have commended thoſe who hazard

hazard a ſuppoſed claim to the good opinion of the Public.... the principle of being uſeful to ſociety, and themſelves... the Author of this Eſſay now hazards that reputation, which has hitherto been confined to the ſphere of his practice: and, as health and longevity are bleſſings to which we are permitted to lay a claim, he therefore preſumes to think that this attempt to render the attainment of thoſe bleſſings more certain, and as eaſy as we can, will be favoured with the indulgence of his Readers, and gratify his ambition to be honoured with their eſteem.

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MEDICAL REMARKS.

CHAP. I.

On the Indication to Evacuation, and the Power and Effect of the Evacuant.

THE indication to evacuation of any kind, implies a neceſſity of removing ſomething that exiſts in the habit, which, by its quantity or quality, is, or may become, prejudicial to health. It is not, however, the mere evacuation, but the action of the ſpecific ſtimulus, which promotes it, that gives partial or univerſal ſympathy, and thereby reſtores the oſcillatory motion.

Medicines, whether applied externally or internally, act primarily by organical motion; and then on the fluids in a ratio proportionate

to the texture and velocity of the blood, the temper of the ſolids, and their own natural inherent power, in their peculiar ſphere of action.

For exciting evacuations, the learned and attentive proficient will not only adopt the kind of ſtimulus, and quantity of the evacuation, to the ſex, age, temperament and conſtitution of his patient, but even to the ſeaſon of the climate in which he preſcribes. I have ſeen ten grains of ipecacuanha operate as forcibly in ſummer on a patient at Gibraltar in the latitude 36°, as thirty did on the ſame habit in winter at Edinburgh in the latitude 57° *.

The mode of living has alſo its particular effects. The ſeafaring man, who is accuſtomed to live on ſaline, hard, and flatulent food, is not eaſily moved: and the ruſtic may live on milk, till the inteſtines can ſcarcely feel the effect of any ſtimulant †.

The

* "Differunt pro natura locorum, genera medicinæ; & aliud opus eſſe Romæ, aliud in Egypto, aliud in Gallia." Celſus.

† "Les montagnards qui ne vivent preſque que de lait, ont des fibres ſi peu ſenſibles, qu'il faut pour

The peculiarities of different conſtitutions, the accidents of life and their effects, are likewiſe ſo many and ſo various as totally to prevent a poſſibility of fixing them to any eſtabliſhed data: and it is ſo obvious to every one, that it ſeems almoſt ſuperfluous to obſerve on, the neceſſity of being well acquainted with the particular virtues, and different effects, of the ſame medicine in its various preparations—Aſarum, an emetic in its primary influence on the ſtomach, becomes a diuretic when taken in a weak decoction: antimonial wine, when taken in ſufficient quantity, vomits, and that powerfully: diaphoretic antimony, ſweats; and yet both are inſipid to the taſte. In the ſelection of drugs, we muſt not only attend to the apparent diſcrimination of their native excellence, but to the time they have been gathered. To obtain the intended benefit of theſe, we muſt attend to the operations of Nature, and care-

les purger, des doſes qui tueroient tous les payſans de la plaine. Il y a dans les montagnes du Valais, des hommes qui prennent tout à la fois juſqu'a vingt, & même vingt quatre grains de verre d'antimoine, dont un grain ou deux ſuffiroient pour empoiſonner des perſonnes ordinaires." Tiſſot, Avis au Peuple, Des Purgations, ſect. 551, p. 519.

fully avoid an abrupt obtruſion when ſhe means to be her own phyſician, leſt, inſtead of aſſiſting, we drive her into confuſion, perplexity, and embarraſſment. We, however, muſt be equally cautious of not depending on her for too much; for, in the catalogue of human miſeries, there are diſeaſes that will not bear to be trifled with, or for a moment neglected; pleuriſy, lues venerea, ſcrofula, leproſy, ſcurvy, cancer, yaws, could never be cured by the mere efforts of Nature, which the ſtroke of an apoplexy would inſtantly ſubdue, if theſe efforts of Nature were not inſtantly aſſiſted by the efforts of Art. It therefore is obvious, that great efforts of judgment are frequently wanted to ſelect and apply ſuch aſſiſtance as hath been given us for the preſervation of life; and more eſpecially ſo in determining the proper evacuations, on which that event of ſucceſsful practice ſo exceedingly much depends. But, in determining on thoſe proper evacuations, it is to be cautiouſly obſerved, that the natural powers of action muſt never be brought ſo low as not to be capable of ſome reſiſtance to the approaches of diſeaſe.

It has often been queſtioned, whether medicines are poſſeſſed of elective attraction. Though we cannot affirm, from demonſtrative proof, that they ſelect or act on the morbific particles only, yet we obſerve that all ſimples have a power of acting, more or leſs, upon this or that organ, and of accelerating the motion of the fluids through their emiſſary veſſels; and of inviting other fluids from remote parts to be diſcharged along with them. Thus, rhubarb, cellery, aſparagus, onions, nutmeg, mace, turpentine, act, as it were, ſpecifically and uniformly on the renal organs; mercury, on the ſalival; and antimony, on the miliary glands. For this reaſon it is, that medicines have not been arranged according to their ſenſible or ſecondary qualities, but according to their operative powers. All bitters, for example, do not act alike; ſome being emetic, ſome cathartic, and ſome ſtomachic.

Artificial evacuations, if not very ſoon ſucceſsful, become prejudicial. Cathartics, and indeed all other medicines, have moſt effect on their firſt exhibition; but, by becoming familiar, the habit will continually require their increaſe;

increaſe; from whence it is evident, that no medicine ſhould be too frequently uſed, even in the ſmalleſt doſe, leſt it ſhould pall the ſtomach, vitiate the nutrimental juices, defile the blood, induce debility, and increaſe the diſeaſe, it, by this means, perhaps, is deprived of power to cure. There is nothing worthy the name of medicine that is not capable of doing harm, and which it alſo often does, when raſhly and indiſcriminately uſed upon emperical, rather than upon rational dogmatical principles.

CHAP. II.

On Evacuation by the Stomach.

THE preternatural motion of vomiting may be variouſly excited.

Firſt, *ſymptomatically*; when, on receiving contagious infection, the ſtomach is early affected by nauſea.

In petechial, or purple ſpotted fevers, immediately before the eruption, this ſymptom is common; but it ceaſes when the puſtules appear, though it returns when they recede.

Imme-

Immediately before the paroxyſm of remitting and intermitting fevers, ſpaſms in the primæ viæ are accompanied by vomiting of bilious ſordes.

On an approaching fit of the gout, patients, in general, nauſeate and loath their food; ſome are ſo ſick as to vomit, eſpecially in a morning before breakfaſt.

The black bile diſcharged from the ſtomach, as in the morbus niger of Hippocrates, is an evident ſymptom of the depraved ſtate of the blood and bile.

The puking of infants is, for the moſt part, occaſioned by a repletion of the milk on the ſtomach becoming acid and offenſive; when Nature, by this ſimple effort, gets rid of the noxious aliment, which, if diſtributed through the circulating fluids, would prejudice the conſtitution. This effort is beſt aſſiſted by ſmall quantities of ipecacuanha wine; for that ſtrengthens the ſtomach and bowels, which might loſe their proper tone if the puking continued; when dangerous ſymptoms, ſuch as nervous ſpaſms or convulſions, diarrhœa, or hectic, would enſue.

When

When adults vomit ſpontaneouſly, it is neceſſary to explore and find out the primary inciting cauſe before any attempt is made to repreſs or encourage it. For inſtance, if in the nervous hyſteric patient it is ſuddenly repreſſed by opium or aſtringents, anxiety, oppreſſion, convulſions of the limbs, will come on, and the ſickneſs return with greater violence.

If the emotion ſhould happen to be occaſioned by a diſcharge of the catamenia from the mouth, to ſtop it haſtily would pervert Nature, and check her ſalutary deſign; perhaps throw it on the brain; and, as I have ſeveral times ſeen, produce mania. But in hœmoptyſis, or caſting up of blood, attended with inflammation or fever, the ſtimulus of an emetic would only enrage the ſymptoms, which refrigerants and cooling reſtringents might diminiſh.

On the proper tone, contractile power and warmth of the ſtomach, depend the harmony and energy of the ſyſtem: atony, weakneſs and frigidity, produce its diſcord. As the ſtomach is the primary ſeat and center of many of the motions in remote parts of the ſyſtem,

ſyſtem, it conſequently ſhould be the firſt part attended to. The matter ejected from it determines the practice; and may alſo, in a great meaſure, predict the event.

2. *Sympathetically.* A remarkable ſympathy is maintained between the ſtomach and brain. If the ſtomach be in diſorder, the head is diſordered alſo; and, if the brain be injured, nauſea and vomiting immediately ſucceed. There is alſo a great ſympathy between the brain and the heart: the energy of the one depends upon the propelling force of the other.

Sympathetic vomiting in the firſt months of conception, is occaſioned by a regurgitation of the blood to the ſuperior parts from the retained menſes. Venæſection, reſt, and tranquillity ſubdue it; it however, may be neceſſary to add the aſſiſtance of ſome ſpoonfuls of barley-cinnamon-water, ſpearmint tea, or ſaline julep, with ſome extract. cicutæ. Cold ſpring-water is the beſt drink. For the ſame reaſon ſimilar naufeating ſymptoms afflict thoſe who have no menſtrual diſcharge. This ſickneſs affects both after eating or drinking.

Sympathetic vomiting alſo is occaſioned by ſtone in the pelvis of the kidneys, or in the gall-bladder, which is quieted by ſedatives and antiſpaſmodics.

Sudden ſurpriſes, or violent emotions, whether by joy or grief, have great effect upon the ſtomach, digeſtions, excretory organs, and nervous ſyſtem, as is evident by the nauſea, deliquium animi, cold partial ſweats, tremor, and debility, that ſo frequently affects the delicate, feeble, irritable habit.

The vertiginous motion of ſea-ſickneſs occaſions nauſea and vomiting, on which occaſions the remarkable diſcharge of bile from the mouth, demonſtrates how greatly the biliary organs are operated upon, and thereby the efficacy of the ſtimulus of an emetic in biliary obſtructions from crude viſcid bile.

3. *Antipathetically.* The antipathy or averſion, that ſome perſons have to certain things is ſo great as to make them ſwoon, vomit, or purge at the ſight or even ſmell of a cat, a mouſe, cheeſe, or medicine. Whatever is loathſome to the ſight, or has a fœtid ſmell, or a nauſeous taſte, raiſes abhorrence, and excites vomiting.

4. *Cri-*

4. *Critically.* If vomiting be critical, it becomes a cure of the reigning diſorder, by anticipating it in the beginning, or by ſeparating the noxious parts from the purer juices in the advanced ſtage. An imperfect criſis leaves ſo much of the morbid principle in the habit, as, with great difficulty, if ever, is overcome.

5. *Artificially.* The artificial emetic is an excellent imitation of the critical ſpontaneous vomit; and often produces the moſt important effects. The emetic not only cleanſes the ſtomach of crude indigeſted matter, but ſympathetically influences the remoteſt parts of the ſyſtem to a diſcharge of their contents, and thereby purifies the body of morbid or noxious particles. Nothing, therefore, is ſo effectual as the emetic for relieving a cough, or difficult reſpiration; for it opens obſtructed ſecretions, and takes off the oppletion or fulneſs, from the veſicles of the lungs, head, faucial, and miliary glands, and thereby admits of a free and regular circulation through the extreme capillary veſſels.

With reſpect to the power and efficacy of emetics; in the nervous irritable habit, the

very active ſtimulant increaſes the irritability, by accelerating the motion of the fluids, until atony in the vaſcular ſyſtem is induced: the leſſer ſtimulant, on the contrary, invigorates and, like moderate exerciſe, gives ſtrength and elaſticity to the ſolid fibre, which, by too much exertion is debilitated. The full emetic operates briſkly, unleſs the patient's ſtomach be too haſtily drenched with water, which weakens the fibres of the ſtomach, and has been known to deſtroy its contractile power.

The very gentle emetic is apt to paſs off by the inteſtines; but even then it is beneficial, eſpecially in fevers, by taking off the reſtriction of the excretories. The dry emetic, that merely cauſes nauſea, or little more, is very ſerviceable when exhibited on the acceſſion of fever, and in atony of the ſtomach. An emetic in the beginning of a contagious malignant diſeaſe, often prevents its increaſe; but if it ſhould not have that effect, it nevertheleſs fits and prepares the ſtomach for the reception of thoſe remedies which are moſt likely to produce that ſalutary end. The emetic thus given, leſſens the cold and haſtens

haſtens the hot fit of agues; and brings the paroxyſms to regular periods, for adminiſtering with ſafety, and good effect its highly extolled ſpecific, the Peruvian bark.

Many are the circumſtances that indicate, and contra-indicate the emetic. For theſe I refer to the reſpectable therapeutic writers, and more eſpecially to the ingenious Doctor Andrew Duncan's accurate performance on the elements of that branch.

CHAP. III.

On Evacuation by the Inteſtines.

PRETERNATURAL alvine diſcharges may be produced by a vaſt variety of cauſes. Thoſe diſcharges which are promoted by purgatives, are very conſiderable; for the ſtimulus of the medicine extends to the remote parts of the body, and evacuates the different ſecreted fluids by the many excretories that terminate in the various circumvolutions of the inteſtinal canal, the receptacle and drain for their purification. But though it muſt be allowed,

allowed, that purgatives are very uſeful and often neceſſary medicines; yet it alſo muſt be admitted, that the pernicious effects which ariſe in conſequence of their abuſe, are ſeldom attended to.

Purgative evacuants are twofold; lenient and draſtic. They both act, more or leſs, univerſally on the ſyſtem, as well as particularly on the ſtomach and bowels. That ſome of the finer particles of medicines are taken into the habit, and mix with the blood, where they act a new part, is manifeſt from the ſubſequent ſymptoms, and phenomena of the fluid excretions.

The ruffling reſinous ſcammoniate and aloetic liquating purges, very frequently repeated, hurt the ſtomach and inteſtines, ſtimulate the arterial and nervous ſyſtems, increaſe the progreſſive motion of the blood, even to the febrile degree, and determine it in unuſual proportion from the ſuperior parts, by the meſeraic veſſels, which are relaxed and their orifices expanded; the glandular juices likewiſe, by their emiſſaries, flow into the cavity of the inteſtines and renal paſſages, where there is a depletion of the inferior veſſels and a di-

a diminution of their reſiſtance. To theſe ſucceed languor and debility, the ſmall, ſharp, and hoarſe voice, ghaſtly countenance, dejected mind, diſturbed ſleep, convulſive motions, uneaſineſs in the præcordia; which again run into dyſentery, or dropſy, hypochondria, or palſy; and, by the nutritious parts of the aliment being prevented entering the lacteal abſorbents, a *maraſmus*, or extreme waſting, with all the tribe of hectic ſymptoms, enſue. The veſſels collapſe, and their juices corrupt. On diſſection the membranes of the ſtomach and ſmall inteſtines are found abraded, inflamed, and marked with red and variegated ſpots; ſo that ſevere purgation is almoſt equal in its pernicious conſequence to the corroſive effects of real poiſon. Eraſiſtratus was of opinion, that ſcammony changes the blood into bile; the flowers of braſs, into water; and grana cnidia, and carthamus, into phlegm.

The draſtic purge is moſt commonly uſed for obſtinate conſtipation, where there is inactivity of the muſcular fibres of the inteſtines, and the juices are ſlow in advancing to lubricate, diſengage and ſtimulate the pent up indurated fœces; but that being once obtained,

ed, the ſtimulating forcer is then to be relinquiſhed, leſt, by a hypercatharſis, or exceſſive purgation, the natural craſis of the blood be broken down, the alimentary fluid defrauded, perſpiration leſſened, and vital heat extinguiſhed.

Obſtinate conſtipation demands the moſt ſedulous attention, as, by the irritation and increaſed debilitating action of the indurated fœces retained in the inteſtines, many alarming ſymptoms are brought on: ſuch as heat, thirſt, cough, head-ach, indigeſtion, flatulency, fœtor of the breath, hiccup, habitual conſtipation, or loſt tone of the inteſtines, iliac paſſion, *mortification*.

The draſtic cathartic, as I have juſt now obſerved, is the medicine generally referred to. However, I have ſucceeded ſometimes by the lenient when the draſtic had been rejected by the debile ſtomach, and even when it remained there. This, I apprehend, was occaſioned by the ſtomach and inteſtines being brought into a ſtate of tenſion by the ſtimulus of the draſtic, which prevented excretion; but the lenient, by operating more kindly, prevented that reſiſtance, and therefore was effectual.

effectual. The purging medicine, however, whether lenient or draſtic, does not act at all times alike on the ſame perſon: when it meets with ſharp humours, or is untimely adminiſtered, as during the courſe of ſome critical or periodical diſcharge, it will, at ſuch time, act with great violence. When the cathartic is unembarraſſed with foreign or crude matter, it acts more pleaſantly: wherefore it is that a purge operates beſt upon an empty ſtomach, and paſſes on to the inteſtines; whereas, the emetic operates with moſt certainty when the ſtomach is full. If the bowels are emptied by a clyſter in the evening, the purge taken next morning will operate readily.

But though draſtic phyſic be objectionable, as improper in ~~this diſeaſe~~ the gout, yet lenient and cardiac is often neceſſary and proper. The ſtomach and bowels muſt be evacuated before an attempt be made to expel the gout from a viſceral part to the extremities. The patient muſt not be ſuffered to endure conſtipation: an occaſional diſcharge of thin bilious ſtools obviates a paroxyſm. To ſtop this, or, indeed, any other flux prematurely by ſtyptics, that is, before the inciting particles are ob-

tunded, deſtroyed, and evacuated, is dangerous; and by obſtinately attempting to carry it off too haſtily by purgatives, there is a danger of heightening the irritation, and debilitating the tone of the inteſtines. Rhubarb and myrobalans will do it the leaſt, becauſe they are binding as well as laxative.

In cholera morbus, or flux of bile by the mouth and anus, in remarkable hot ſeaſons, that exalts the bile, we are to temper, ſoften, refrigerate, pacify, and ſtrengthen. Common diarrhœas, in the ſame ſeaſons, are to be treated nearly in the ſame manner as to generals. Too great an evacuation of bile, either upward or downward, is prejudicial to chylification, conſequently to nutrition and ſecretion, from whence enſues the cold acid temperature, attended with paleneſs, weakneſs, ſwooning, &c.

Though lenient phyſic obviates and relieves in a venereal gonorrhœa, yet ſuper-purgation is ſtill more detrimental to the conſtitution than even the malignity of the virus itſelf. By it, and the diſeaſe, youth are rapidly incumbered with the infirmities of age, and prematurely ſurrendered to the oblivion of a grave,

grave, unleſs the diſeaſe of the parent ſhould be entailed on a progeny that may be a peſt from their birth, and as loathſome to ſociety as miſerable to themſelves.

The Faculty have much difficulty in ſatisfying venereal patients, who have been long on a courſe of purging medicines. Their perceptions are ſo much quickened by nervous irritation, as to impoſe on their deluded imaginations, and afflict them with all the horrors and torments of ſuppoſed real ſymptoms, which are merely ideal, or, at moſt, but ſymptoms of debility. Such impatience, however, I believe, in general is exceedingly reprehenſible; for I have never, in the courſe of my practice, ſeen the blood ſo very corrupt, the ſecretions ſo vitiated, or the bones rendered ſo foul by this diſorder, as not to be cured by the ſlow but ſure alterative, ſuch as the pills and decoction I have particularized below *.

The

* ℞ ſulphur. antimon. præcipitat. ℈ij.

Calomel. ppt. ℈i. Terantur ſimul diu in mortorio vitreo. Poſtea add.

Refin. Guajac. pulvarizat. ʒi.

Camphor. ℈ij.

The judicious and truly wiſe will always ſeek the permanent, though ſlow acting cure *.

Nothing hath yet been diſcovered to equal mercury for lues venerea; but the beſt things may be abuſed. The ptyaliſm raiſed by mercury, is a diſcharge, it is true, of morbid ſeroſity from the blood, in imitation of the ſpontaneous and critical diſcharge by the ſalivary glands in ſome putreſcent diſeaſes, ſuch as ſmall-pox; yet my experience does not enable me to ſpeak very highly in favour of this artificial drain. In ſhort, the effects I have ſeen in conſequence of it, forbid my ever ſalivating another patient. I can, indeed, ſpeak boldly of the utility of mercury, not only in

Extract. cicutæ.

——— Hyoſciami a a ʒſs.

Balſam. Canadenſ. vel copaib. q. ſ. f. maſſa. E ſingulis ſcrupulis pilul. No. vi. formand. quarum ij. iij. iv. vel vi. nocte maneque, ſuper bibendo hauſtum (unc. ſex ſaltem) decoct. lignorum ſecundum pharmacop. Edinburgenſis, vel decoct. rad. ſarſaparill. bardan. glycyrrhiz. vel. ex lign. juniper.

* Sed fere periculoſa eſſe nimium et feſtinatio et voluptas curet. CELSUS.

this,

this, but in other inveterate complaints, when given in ſmall doſes, and at ſuch proper diſtances, as not to ſalivate. I have, for inſtance, a great number of times, cured dropſy in the incipient ſtage, by a courſe of one grain doſes of calomel to four of camphor, and two of extract. hyoſciami. I ordered a doſe every night; and after every fifth or ſixth night a gentle doſe of phyſic, ſuch as ſix or ſeven grains of pulv. jalap. with ten of cremor. tartar. During this courſe I alſo ordered a decoction of dandelion-root, or juniper-berry tea; and, ſome days, a cupful of white horehound tea.

The mercury increaſed the impetus of the fluids, and capacity of the ſecretory orifices; that is, it was deobſtruent, while the camphor excited genial warmth in the blood, and the extract aſſiſted not only to make the operation of the mercury eaſy, but to correct the vitiated fluids, and promote evacuation through the cuticular and renal emunctories.

Thus alterants are not wholly diſtinct from evacuants; indeed, I know no diſeaſe that is perfectly cured without evacuation by ſome outlet or other.

It is difficult to maturate or reſolve the ſchirrus venereal bubo, which is in want of heat and vibration to liquify and reſiſt the inſpiſſation, and ſpur on the ſtagnating lymph in the cells of the glands. Indeed cold indurated tumefactions of any kind are tedious, and are never ſafely nor compleatly reſolved without univerſals, which deſtroy the cementing principle, and diſcharge inſenſibly as well as ſenſibly the noxious particles. I have often been ſo fortunate as to ſucceed in theſe caſes by the alterative pills and decoction particulariſed in page 19 and 20.

The warm mineral ſprings and tepid ſea-water bathing help much to reſolve and diſperſe the ſtony ſchirrus, before it degenerates into the painful corroſive cancer.

Strong purging has been recommended by ſome eminent men, for dropſies; but for what reaſon is not ſufficiently evident to me, as the cacochymic and leucophlegmatic habit is brought on by nothing ſo ſoon as by it. It is true, that much water is thereby carried off; but the ſolids are left in a more debilitated ſtate, and, conſequently, the water, by meeting with but ſmall reſiſtance, and ſweat

and

and urine being diminiſhed, again accumulates faſter. I have had many dropſical patients in all its ſtages; but, though I will not pretend to ſay I have been ſo fortunate as to cure them all, nor the one half, yet experience authorizes me to aſſert, I have ſucceeded with a conſiderable number by the lenient method—with none by the draſtic *. The lenient phyſic operating kindly, it expanded the excretory orifices, and allowed the obſtructed fluids to paſs off gradually without occaſioning languor, debility, or deliquium animi, which generally attends draſtic purgation, or the operation of the paracenteſis.

If dropſies proceed from ſuch a laxity of the fibres, as to be deprived of power to impel forward the influent fluids, ſurely it becomes neceſſary to reſtore the vaſcular ſyſtem to its natural elaſtic ſtate, by roborants, ſtimulants, exerciſe, nutrients, and, occaſionally, gentle aperients, rather than weaken it farther by debilitating draſtic cathartics, which carry off the very nutritious particles that would reſtore the relaxed fibres to their due

* Hydrapicis alvum moliri cibo melius eſt quam medicamento. CELSUS.

tone,

tone, and thereby effect it. The action of the body depends on the elaſticity, ſtrength, and configuration of the ſolids; and theſe on the quantity and quality of the contained fluids. The evacuation of the water by paracenteſis does not remove the cauſe; but, as the force and energy of diet and medicine is much clogged and impaired by the load of ſtagnating water, cures have, ſometimes, been performed by thus taking off the water before the ſolids had loſt their contractile power.

Purging the belly takes off the rigor of the brain, and promotes a revulſion. I happened to relieve in two inſtances of recent mania, by ordering a courſe of laxative pills, compoſed of extract. rudi, pilul. rufi, extract. cicutæ & calomel. The patients took a doſe of theſe pills every other day for two or three weeks.

In melancholia, lenient phyſic, and ſuch as evacuate bile, ſuit beſt.

In leproſy, ſcrofula, and ſcurvy, draſtic phyſic is inadmiſſible, the blood and ſecreted juices being too much impoveriſhed. Mercury, in particular, is to be uſed ſparingly in theſe

theſe conſtitutions, as in them its action is ſo quickly ſhown on the glands of the mouth.

From retention of lymph, ariſes head-ach, tooth-ach, rheumatiſm, catarrh, pectoral ſtuffings, quinzy, apoplexy, lethargy, nervous affections, languor, dulneſs, dropſy, &c. In ſcrofula, the lymph becomes ſo viſcous and inſpiſſated as neither to be abſorbed nor exhaled, conſequently ſtagnates in the lymphatic glands until the veſſels can no longer reſtrain it from iſſuing forth—the thinner part oozes through the ſkin. The meſeraic glands of ſome become ſchirrus; and, as ſufficient nouriſhment cannot be received to ſupport the body, atrophy, or waſting, enſues.

By the power of ſudorifics, the thin lymph is expelled in the form of ſweat; and, by means of the draſtic purge, it is brought from all parts of the ſyſtem into the emptied veſſels in the inteſtines; whence it is excreted in the form of liquid ſtools. Indeed there is nothing but what may be expelled by the inteſtines, until the body is reduced to a mere ſkeleton.

No well-meaning perſon will give draſtic phyſic during pregnancy, becauſe it would af-

feɛt the membranes of the inteſtines and nervous ſyſtem ſo ſtrongly, as to be productive of violent ſpaſms, and ſtimulate the uterus to an expulſion of the fœtus, at the riſque of the mother's life.

After delivery, at the full time, it is expedient to give ſome lenient phyſic to promote the lochial diſcharges, to clear the habit of ſordes accumulated during geſtation, and to prevent purpureal fever.

Though, in hot uterine affections, relief is obtained by repeated refrigerant purgations, and the tepid bath, yet I have known an hyſterical woman, who, after delivery, had, from repeated large doſes of draſtic purging ſalts, a dangerous increaſe of her ſymptoms.

For flufhing heats and fiery eruptions on the ſkin, purging ſalts, or ſea-water draughts, are commonly recommended; and, in many caſes, they are of infinite uſe. Theſe are termed coolers; but whatever be their effect poſt operationem, yet no medicines can properly be ſaid to be coolers, which, during their operation, induce heat and thirſt, even to the febrile degree; and for which very reaſon it is, that ſea-water draughts are efficacious in the cold

cold chronic diſeaſe, but not in the acute or inflammatory. The operation of ſea-water is quick and eaſy, without inducing languor, and is the propereſt phyſic to be taken during a courſe of ſea-bathing. The only danger is in the exceſs; for, if taken in very large quantities, and long perſiſted in, by deſpoiling the nutritive juices, it impoveriſhes the blood, and brings on thoſe very diſeaſes, the ſcurvy and leproſy, which it is ſo remarkably famous for curing.

An Officer in the Eaſt-India ſervice, on his paſſage home to England, happened to have ſome hot pimples come out on his face, for which he was adviſed to drink ſea-water, which, at firſt, he thought did him good, and improperly continued drinking it, day after day, till it ſo far impoveriſhed his blood, that, when he arrived in London, his face had an appearance of leproſy. He then had recourſe to Norris's mercurial drops, which, inſtead of curing his diſorder, ſtill thinned his blood more, and exaſperated his ſymptoms. In that ſtate, he applied for my advice. I ordered him to drink a draught of ſweet-wort every morning; to live regularly on plain and un-

ſeaſoned food, and to drink ſome generous red Port wine at dinner; by which, and the uſe of daily exerciſe, on horſe-back, he perfectly recovered in a ſhort time.

Sea-bathing, however, is very efficacious in a variety of diſorders; ſuch as glandular obſtructions, chronic rheumatiſm, ſcurvy, leproſy, depreſſion of ſpirits, palſy, epilepſy, hyſteric and hypochondriac affections, and in nervous complaints in general: in fluor albus, gleets, or ſeminal weakneſs, diabetes, ſprains, rickets, and in almoſt all complaints ariſing from relaxation of the ſolids; in profuſe and in ſuppreſſed menſes from debility, and not from inflammation or plethora.

It alſo is recommended by Boerhaave for the bite of a mad dog before ſymptoms of hydrophobia appear.

But it is likewiſe neceſſary to obſerve, that, though ſea-bathing relieves ſome complaints, it nevertheleſs exaſperates others; ſuch as gout, which it is apt to throw on the brain; inflammatory complaints; febrile heats; phthyſis pulmonalis, or conſumption of the lungs, and other diſeaſed viſcera; which is proof

proof of the heating quality of ſea-water, whether uſed internally or externally.

It is not the ſea-water only that is beneficial, but the ſalubrity of the very air has a wonderful effect in exalting the ſpirits, creating appetite, promoting digeſtion, and exciting reſt.

The preferable time for ſea-bathing, is early in the ſummer, and towards the end of the autumn; that is, thoſe ſeaſons when the weather is neither too hot and relaxing, nor too cold and inclement. The efficacy of the water depends on the temperature of the weather.

Though I have long attended to the effects of ſea-air, ſea-water, and ſea-bathing, on the healthy as well as on the diſeaſed, yet, being anxious for more full information on theſe ſubjects, I went to Margate laſt ſeaſon, where my former opinions were confirmed by the many opportunities I ſought to make freſh obſervations, and by the very uſeful information I received from that ingenious and ſucceſsful Practitioner Mr. George Slater.

The firſt caſe preſented, was that of a Mr. Willis from London, a gentleman about ſixty years of age, whoſe legs had been in one continued

tinued ſcorbutic ulcer, from the knee down the anterior part of the tibia to the foot, and which had long reſiſted the ſkill of the Faculty. With the idea of its being almoſt a loſt caſe, he went to Margate a few months before the time I met him, when his legs were compleatly healed; and he was, not only in that, in every other reſpect, in perfect health. He alternately drank the water one morning, and bathed the next.

A Gentleman who came from London, aged about forty-five, had been ſeized with a hemiplegia, or palſy of one ſide, attended with the loſs of ſpeech, and difficult deglutation. He had been for ſome months under the care of the Faculty, and twice at Bath; the firſt time, for the ſpace of ten weeks; the ſecond for ſeven; but receiving no relief, he had got to Margate, where for ſome months he had bathed every other morning, and intermediately drank the water when I met him at Philpot's. He had then regained his ſpeech and power of ſwallowing, could walk and get into his carriage with a very little help, and was alſo daily gaining ſtrength in his ſide.

The

The following caſes were given me by two careful and attentive Proprietors of the principal bathing houſes.

1. A Lady, from irregularity of her menſes, had a large indurated ſwelling on both ſides of her neck, extending from ear to ear, and attended with ſymptoms of great debility; but by bathing in the ſea for about ſix weeks, and intermediately drinking the water, the monthly viſitation became regular; the ſwelling totally diſappeared; and, in a word, ſhe was reſtored to perfect health.

2. Two infant brothers were overſpread with running ſores, ſo very fœtid, as, whenever they were bathed, to render it neceſſary for the doors of the machine to ſtand open, to ventilate it before others could go into it. But after they had been bathed, once a day, for a fortnight, during which time the diſcharges increaſed, the ſores gradually diminiſhed; and, after they had been dipped in the ſea one hundred and three times, and drank the ſea-water occaſionally, the children were thereby reſtored to perfect health, and continued ſo three years after their cure, when I received the above account of them.

3. A Lady, after delivery, went to Margate in ſo very feeble a ſtate, as to require, for ſometime, to be ſeated in a chair, and let down from the machine into the ſea. However, after ſtaying at Margate for a few months, ſhe left it in good health and ſpirits.

Ten thouſand caſes might be given every year of the efficacious powers of ſea-water, ſea-bathing, and ſea-air; but theſe few inſtances, now given, aſcertain it fully to me.

If the emerſion is ſucceeded by a glowing warmth, the bath is ſalutary; a reverſe ſenſation is proof of the reverſe effect, unleſs the efficacy of the water has been perverted by the antipathy of the patient. But that, by the indulgent kindneſs of humane, judicious Guides, is almoſt always overcome.

I recommended a rheumatic patient, who had been long ſubject to the complaint, and attended by other Gentlemen, to try the force of ſea-bathing. He went to Brighthelmſtone; where, after bathing twice in the ſea, and finding himſelf chilly on coming out, and his inflammatory ſymptoms increaſe, his Apothecary judiciouſly directed him into the warm

ſea-water

ſea-water bath. After bathing in it three or four times, he found himſelf relieved of all his obſtinate ſymptoms, and returned home in ten days to his family.

Mild aperient land-ſprings act beneficially as alterants, and ſuit in many caſes wherein ſea-water would be improper: they ſoften the tenſe fibre, aſſiſt the appetite, and promote digeſtion. But, however uſeful they may be in a variety of diſorders, the perſeverance of the patient muſt always be proportioned to the ſtrength of the conſtitution and power of the water; for the nature of waters, as of diſeaſes and conſtitutions, are various.

Where the great and laſting change is to be made by the alterant ſpring, it muſt not only be uſed for a conſiderable time, but alſo in the proper ſeaſons.

We muſt always be attentive to Nature, conſider her power, and be guided by its effects. For extracting the virtue of whatever is intended to nouriſh, to ſtrengthen, or to relieve, no proceſs is equal to that of the ſtomach itſelf, upon animal and vegetable ſubſtances. For inſtance, if a dram of rhubarb be taken per ſe, it will have as much effect

as a dram and a half, in any ſort of preparation. Some ſtomachs in health, can diſſolve bones; and moſt ſtomachs, in ſickneſs, will receive and accommodate themſelves to medicines they would recoil at in health. Mineral and foſſil ſubſtances are not ſo reducible as the animal or vegetable to the capacity of the ſtomach without chemical preparation, nor even then, though many ſuch preparations, when properly corrected and judiciouſly adminiſtered, are exceedingly uſeful. Even arſenic itſelf, the moſt powerful mineral poiſon, may be rendered ſafe and efficacious; for many of the moſt potent ſalutary virtues are lodged in the rankeſt poiſons. Thus arſenic is ſaid to poſſeſs the power of curing that deadly corroder the cancer, when guarded and applied externally; and ſome ſpeak of its internal efficacy in the ague. The moſt violent cathartics have their correctors, and the moſt virulent poiſons their antidotes. Sulphur powerfully counteracts the ſtimulus of mercury, as a ſalivant, without ſuſpending its effect as an alterant; but it cannot be ſuppoſed that this can be done without its entering the circulation; though ſome of high note ſay, that Æthiop's

mineral,

mineral, a combination of mercury and ſulphur, is inert, and does not go farther than the firſt paſſages; while we obſerve it to be excellent in clearing the ſkin of foul defedations, and, of courſe, correcting the fluids. Sulphur taken internally renders the ſilver in the pocket black, and emits a ſtench from the pores that no perfume can diſguiſe. Sulphur is aperient: but, if taken very frequently, will cauſe heat and pain in the urinary paſſages. Finally, ſulphur not only counteracts the ſalivating power of mercury, but is ſuppoſed, and is ſaid, to be a ſpecific againſt that of arſenic *.

After violent purgation, Hippocrates adviſes, as quoted by Ætius, to put the patient into a warm bath, and to give him a generous yellow white wine, before and after bathing. The ſtimulus and commotion may be quelled by a

* Sulphur united with any of the metals probably deſtroys their ſolubility in the juices, or at leaſt their effects in the circulation; none of the cinnabars act either as ſulphur, or mercury. Crude antimony, which is regulus of antimony and ſulphur, has no effect. Arſenic when joined with ſulphur has no effect, nor has iron. Hunter's Treatiſe on the Lues Venerea.

few drops of thebaic tincture; or by ſome grains of the extract. cicutæ, which is an excellent and ſafe corrector of the reſinous cathartic, without leſſening its purgative quality.

There are various methods of promoting evacuation from the inteſtinal canal when conſtipated, or when the ſtomach is incapable of receiving, and the throat of ſwallowing.

1. *By clyſters*; which are of two kinds; moiſt and dry; and theſe again are varied according to the intention and nature of the complaint.

Clyſters of ſimple water, adminiſtered once in twenty-four hours, promote perſpiration, dilute the blood, abate thirſt, and remove ſpaſm; they conſequently are uſeful in febrile complaints.

The next in ſimplicity is milk-and-water, or bran-water clyſters. I have often preſcribed theſe, or chamomile tea, and a little common ſalt, and procured motions when ſtronger purging clyſters failed.

Laxative clyſters are for quickly exonerating the inteſtines; but the very frequent uſe of them, or, indeed, of other relaxing and deterging

terging ones, at firſt ſight, would appear to be injurious: by carrying off the nutritious with the recrementitious parts, they leſſen the tenſion of the fibres, and render them unable to perform their animal functions. On the other hand, however, there are many inſtances of life being ſupported and maintained, for a conſiderable time, by nouriſhing clyſters. Hildanus tells us, that Aubery, a Phyſician, fed a woman of quality ſix weeks with clyſters of fowl-broth and yolks of eggs, adminiſtered twice a day.

This nouriſhing power of clyſters is not eaſily conceived, as all the nutritious materials ſeem to undergo a neceſſary previous preparation in the ſtomach for being converted into chyle; and yet certain it is, that I have not only ſupported patients by theſe for days, but even effected their cure by medicinal clyſters. Aſclepiades, and ſome others of the ancients, were of opinion that clyſters were ſufficient in moſt diſtempers. They influence the maſs of blood; for they quicken the pulſe, and facilitate the ſecretions of ſweat and urine.

Clyſters are admiſſible at any ſtage of a fever. They alleviate the pain of the ſtone-

colic

colic and hœmorrhoides; and are ſerviceable in bilious, remitting, and intermitting fevers, dyſentery, lientery, teneſmus, ſuppreſſions of urine, cephalalgia or headach, lethargies, apoplexies, deliria, &c. Opiate clyſters will induce ſleep, the ſame as opiates taken by the mouth; and give check to diarrhœa, by ſuſpending the periſtaltic motion, not by removing the cauſe. Opium does not remove the cauſe of any diſorder that I know. An aperient clyſter, adminiſtered in time of labour, aſſiſts the birth, and the expulſion of the ſecundines.

Avenzoar is ſaid to have been the firſt who propoſed clyſters. He took the hint from the bird ibis, or ſtork, which, by means of its beak, or bill, when Nature indicates the neceſſity of a motion, conveys ſalt-water up its anus *.

The *dry clyſter*, as of the ſmoke of tobacco, has ſucceeded by its ſtimulating and contracting power in obſtinate conſtipation; and is of

* Quæ roſtro clyſtere, velut, ſibi proluit alvum,
Ibis, Niliacis cognita littoribus.

Emblema LXXXVII. Andriæ Alcati.

uſe

uſe in colic, prolapſio inteſtinum, &c.—— Sydenham frequently preſcribed it in iliac paſſion: but he was, by no means, the firſt who thus applied it. In ſome caſes I have preferred an injection of the ſmoke of cephalic herbs. When the embotum, or inſtrument for conveying the ſmoke of tobacco was not at hand, I have, as a ſubſtitute, ordered a decoction of the leaves of tobacco; that is, about two drams to about eight ounces of water, to be injected.

2. *By ſuppoſitories or medicated cones.* Theſe have procured a motion when the indurated fœces prevented the admiſſion of a clyſter. The ſuppoſitory has this peculiar advantage, it occaſions no flatulent diſtention: but the great operation, however, is not to be expected from the mere dry ſtimulus given to the ſphincter ani.

3. *By daſhing, or throwing cold water on the thighs and abdomen*, which is recommended by ſome for ſtimulating the bowels to an expulſion of their fœcal contents; and, in hot climates, it may poſſibly be ſometimes ſucceſsful.

4. By

4. *By electricity.* Electrifying the region of the abdomen powerfully occaſions an inteſtinal diſcharge, by promoting the periſtaltic motion, and ſecretion of mucus. By it I have, ſeveral times, relieved in long and obſtinate conſtipation, when every other means has failed.

5. *By the application of medicines to the external ſuperficies of the ſkin.* Aloes or coloquintida, applied to the umbilical region, will purge. A decoction of hellebore, uſed as a bath for the feet, has a ſimilar effect. When cataplaſms of garlick are applied to the ſoles of the feet, the ſcent is diſcovered in the breath. A cataplaſm of tobacco-leaves, applied to the region of the ſtomach, or feet, will create nauſea, and ſometimes will vomit. But the influence of a medicine applied topically to the ſuperficies of the ſkin, is not ſimply that of evacuation. I have repeatedly allayed ſingultus or hiccup by ſedatives; as, by a cataplaſm of theriaca andromachi on the region of the ſtomach; and, by virtue of the bitter vermifuge on the umbilical region, I have diſlodged worms from the inteſtinal canal. By the tonic and ſedative application to the abdomen, I

have quieted dyſenteric tormina, and given a check to the flux, when the common internal remedies were ineffectual: by a ſimilar application of the Peruvian bark, moiſtened with ſpirit of wine, I have repeatedly cured agues in children; and relieved the head of delirium in fever by a cataplaſm of ſalt-herring to the ſoles of the feet. I have alſo given relief in dyſenteric tormina and teneſmus, by expoſing the patient to the ſteam of turpentine upon live coals. The ſimple application of a large ſlice of toaſted bread dipped in claret wine, in which ſome cinnamon was boiled, and repeatedly applied to the umbilical region, ſtopped flooding, and preſerved life when almoſt exhauſted. The relief is notorious that is obtained, in viſceral parts, by the application of fomentations, baths, oily, and ſpirituous liniments.

It cannot be ſuppoſed, that the groſs and hard ſubſtances of cataplaſms, or plaiſters, are taken up ſubſtantially by the abſorbent ſyſtem, as they are neither diminiſhed in their bulk, nor weight, when taken off; for, as they are then inert and inactive, it is evident, that, while in their full and active ſtate, there was

either an influence of a ſpecific ſtimulant, or a ſpecific ſedative, and alſo an abſorption of their fine eſſential and active parts, to affect a conſent of that which is remote with that which is near.

CHAP. IV.

On Evacuation by Perſpiration.

PERSPIRATION is either natural, ſymptomatical, critical, or artificial.

Natural ſenſible perſpiration, commonly called ſweat, by its ſubtle volatility, evaporates very faſt, and leaves the ſkin dry. In hot climates, the ſaline particles thus exerned, are ſeen condenſed upon the ſuperficies of the ſkin and the cloaths.

Gentle univerſal perſpiration, which is abſolutely neceſſary for purifying the blood and ſecreted fluids, can only be preſerved by due exerciſe, temperate air, comfortable warmth, and cheriſhing diet. Theſe give ſtrength to the body and alacrity to the mind.

The profuſe perſpiration that ariſes from increaſed circulation, by moderate heat, or eaſy

eaſy motion, is a proof of a laxity of the ſudorific ducts, and indeed of the whole ſyſtem, that ſhould be corrected as ſoon as poſſible, by nouriſhing diet, and proper ſtrengthening drinks; by the cold-bath, and by ſuch things as give elaſtic tone and contractility to the ſolids, and due conſiſtence to the fluids. Sweat cauſed by an error in the non-naturals is always hurtful. An accidental ſweat is often beneficial. Strong and firm bodies ſweat but moderately.

Partial deſudations on the face, neck, and thorax, are ſymptomatical; for, as they always come on before diſeaſe has attained its height, or concoction is performed, they are productive of no advantage: on the contrary, if they do not prove fatal, they indicate, at leaſt, a great debility, and long continuance of the diſeaſe. Cold clammy ſweats, either profuſe or partial, if of ſhort duration, portend a more ſpeedy though not leſs fatal event.

If acute diſeaſes are ſucceeded by acid ſweats, and an alkaleſcent diſpoſition prevailed, that ſymptom is ſalutary.

When native alimentary moiſture is evacuated by the perſpiration that is excited from a

daily return of febrile hectic heats, colliquation and emaciation ſucceed. Colliquative ſweats extinguiſh the natural heat; thoſe which are critical, extinguiſh the febrile.

The weakneſs of the natural faculty, and ſtrength of the enfeebling diſeaſe, is ſhewn by nothing ſo much as by imperfect ſweats attended with a coldneſs of the extreme parts.

The copious ſweat that ariſes gradually on the feet, and diffuſes itſelf over the body, towards the acme or height of fever, is critical; and not only ſo in fever but in other diſeaſes: it ſhews the vital faculty is ſtrong. The blood, by ſuch ſweat, is relieved of arthritic impurities. *Dum pedes exſudant nulla podagra.* While flannel can preſerve a ſweat on the region of the ſtomach, the gout will not attack it.

The ſweat of the febrile patient, by a high exaltation of the ſaline principle, becomes fœtid and offenſive. It is better that it flow from than remain in the habit; for, like conſtitutional ſweatings, if precipitately checked, it will create diſeaſe: ſuch as cough, catarrh, rheumatiſm, gout, dropſy: if it fall on the inteſtines, a diarrhœa enſues; if on the renal

organs,

organs, a large diſcharge of urine; if on the pleura, a pleuriſy; if on the lungs, a peripneumonia notha, or a dyſpnœa; if on the joints, a rheumatiſm, or gout; if on the loins, a ſciatica; and ſo of other parts.

Phyſicians order artificial ſweats, in imitation of the genial ſpontaneous and critical ſweats: they ſeldom fail of doing good, when opportunely raiſed.

The *artificial ſweat* does not flow kindly without the aid of external heat. It however muſt be obſerved, that exceſſive heat does not rarify, ſubtilize, or ſeparate; but, like ardent ſpirit, burns and condenſes. It is the moderate and genial heat that expands the cuticular paſſages, attenuates the fluids, and clears the habit: the blood, however, muſt be diſpoſed for this effect, before it is too much forced; which is ſeldom the caſe, unleſs the previous evacuations have been made, and more eſpecially if the phlogiſtic diatheſis prevails. When the ſigns of concoction appear after this, that is the beſt time for increaſing the action of the veſſels, and giving motion to the fluids for their ſeparation. Sudorifics may be conſidered as poſſeſſed of a threefold power. They

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are attenuant, reſolvent, and deobſtruent: they alſo are inſpiſſant, condenſing, and obſtructing; for that which remains of the maſs of blood after the latex or thinner part is diſſipated, is in ſo denſe and coagulated a ſtate, as hardly to be reſolved by art.

The means uſed to raiſe a ſweat are various, and adapted to the nature of the diſeaſe, and to the ſtate of the patient's conſtitution. Some are raiſed by external means, as by the vapour or fumigating bath, which is not only the moſt pleaſant, but the moſt effectual, either for an incipient or long ſtanding diſeaſe.

The moſt powerful internal ſudorific is the alkaline. As the alkaline ſudorific and anti-acid diet moſt readily attenuate, neutralize, and retrieve the motion of the blood when deprived of its fluidity, it would ſeem that the coagulation is occaſioned by the effect of ſome prevailing acid; though I do not know that any experiments yet made upon the natural chyle, or new milk, or freſh drawn blood, or recent rendered urine, have diſcovered either acid or alkali in propria forma in them; except it is by Homberg's and Lemery's; which, perhaps, were made on diſeaſed blood.

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As acid is ſo oppoſite in its nature to milk, chyle, or blood, that it occaſions them to coagulate; it therefore is evident, that the too liberal uſe of acid is improper, as it does not make the mixture uniform.

The gouty habit is much annoyed by acidities in the primæ viæ; and perſons who drink acid liquors ſoon find them productive of pains in the joints and extremities, ſimilar to thoſe of the gout and rheumatiſm; which diſorders being remarkably frequent in cyder counties, and in countries where ſharp, acid, and auſtere wines are in common uſe, theſe, and all acid liquors, have therefore been generally ſuſpected as promoters of ſuch complaints.

Some, as Doctor John Armſtrong, ſuſpect a ſubacid acrimony to be lurking in the gout. It is of conſequence to know this, as it would give a key to the treatment of the diſeaſe.

The alkaline diaphoretic, by increaſing the action of the ſolids and giving motion to the fluids, promotes ſufficient heat for preventing the cold fit of fever. It cures a cough, and is ſerviceable in catarrh, diabetes, dropſy, rheumatiſm, dyſentery, and lientry, by turning off and diverting the acrid ſtimulating ſeroſities

that

that have an inward tendency, and relax the tone of the bowels. Upon this principle it is, that emetics and diuretics are of ſuch ſovereign uſe in theſe complaints.

Although ſudorifics relieve diſeaſed habits, ſupport natural warmth, and are more ſafe and more certain in their operation than purgatives, yet, if the blood is very often excited by hot ſtimulating and inflammatory medicines, they will confound the natural motions, affect the brain, and depreſs the mind: inſtead of temperating acrimony, and allaying ſpaſm, they will not only increaſe theſe, but deprave the blood; as may be perceived by the ſaliva, and by the urine acquiring a putrid fœtor. Nothing changes the type of an intermittent to a continued fever, or renders it more fixed, ſo ſoon or ſo certain as the immaturely forced ſweat.

To force a ſweat in the beginning of a miliary fever, is prejudicial; for it encourages the eruption, and thereby increaſes the putrid ferment.

Inſenſible perſpiration, though natural, is very different from *the ſenſible*. It is the moſt putrid diſcharge from the body, and the moſt fugitive;

fugitive; as, indeed, all putrid effluviæ are. It iſſues from every part of the body. According to Sanctorius, the diſcharge of this ſubtle matter is equal to five eighths of the food. When the urine is eight ounces and the fœces four, inſenſible perſpiration is at leaſt forty. Aſtoniſhing!——Be that, however, as it may, this, we know, is certain; whenever that inſenſible fluid is ſuppreſſed, or impeded, it is taken up by the abſorbent lymphatics, and mixes with the blood; in which it increaſes the ſeptic ferment, and occaſions the moſt deſtructive diſorders. The quantity of this diſcharge is proportioned to the habit, the ſeaſon and climate.

Senſible perſpiration is moſt obvious in thoſe who are moſt remarkably fat; for the profuſion of their fluids relaxes the cuticular paſſages and overbalances that equipoiſe which the ſolids would preſerve.

CHAP. V.

On Evacuation by Expectoration.

EXPECTORATION is not performed merely by the ſpecific action of the expectorating medicine; it requires the aſſiſtance

of a certain aptitude of air which gives impulſe and motion to the organs of deglutition and reſpiration. Fume or vapour on the palate and fauces relaxes the excretories and ſeparates the phlegm; but cannot poſſibly be of the leaſt ſervice towards promoting expectoration from the glandular emunctories of the lungs, becauſe every thing groſſer than the natural air that enters the trachea and bronchiæ of the lungs, creates vehement diſturbance. The vapour-bath, when applied externally to the pulmonary region, is far more effectual; for it renders the matter moveable, and ſtimulates an excretory motion.

That natural ſtimulus to expectoration, a cough, if excited before the matter is detached from the blood, and while the pulſe is yet ſtrong, and the heat intenſe, as in the beginning of phthiſis, hæmoptyſis, pleuriſy, or peripneumony, inſtead of relieving, rather tends to augment the congeſtion of blood; it increaſes the cough and difficulty of breathing. Expectorants, for the ſame reaſon, however neceſſary, muſt not be uſed too ſoon.

The natural criſis of cough, pleuriſy, peripneumony, or pleuro-peripneumony, is expectoration.

pectoration. This excretion is promoted artificially by external as well as by internal means; sailing under gentle motion, or riding slow on horseback, in proper air, gives uncommon alacrity, increases perspiration, excites appetite, promotes digestion and expectoration, to the great relief of the lungs and chest: hence the passive exercise of sailing, and gentle riding, has been so strongly recommended as particularly beneficial in phthisis pulmonalis—a disease which, by the bye, I am far from thinking incurable, provided the patient enjoyed a previous good state of health; that the disease was not original, but acquired, and opposed in due time; that is, before the affection advanced to vomica; or tubercules or concretions were formed in the bronchiæ of the lungs; or empeyma in the chest*. While

* Empeyma, or purulent collection, succeeds an inflammation of the lungs that has not been resolved by expurgation, expectoration, revulsion, or crisis. The distending matter being too sizy for absorption, and having no immediate vent by excretion, stagnates, becomes putrid and acrimonious; inflames the adjacent parts, and destroys quickly: absorption and evacuation must therefore be procured as soon as possible, by vomition, purgation, expectoration, urine, and paracentesis.

the diſeaſe, I ſay, is in its primary ſtage, and the inflammation has reached no farther than the ſurface of the lungs, or but a ſmall part of them is ulcerated, and the matter benign, it is much within the power of art to cure, or to prevent its farther progreſs; wherefore it is truly unfortunate for that patient whoſe relations and attendants, from a vulgar opinion of the diſeaſe, in any ſtage, being incurable, neglect to conſult the Phyſician until medicine, diet, and regimen can, in reality, do no more than merely palliate the ſeverity of its ſymptoms for the remains of a ſhort exiſtence.

Phthyſis or conſumption, whether pulmonary, renal, dorſal, meſenteric, uterine, or nervous, though the exerciſe, diet, and regimen be nearly the ſame in every hectic, yet their different cauſes muſt be attended to; as muſt alſo the different ſtages of the complaint; for the inflammatory, the colliquative and purulent, require very different modes of treatment. By a due attention to diet, exerciſe, and regimen, with the occaſional aſſiſtance of a little mdicine and *proper evacuations*, it is, that hectic ſymptoms have a chance of being

ſubdued.

ſubdued. But, if theſe are permitted to advance till the conſumption is confirmed, no Phyſician, I believe, will be ſo deluſive as to promiſe beyond the palliative cure. Principiis obſta.

CHAP. VI.

On Evacuation by Urine.

THE component parts of this lixivium of the blood is in proportion to the natural or preternatural ſtate of the habit, circumſtances of ſeaſon, ſituation, mode of living, and exerciſe.

On examining the urine, we attend to the quantity, colour, conſiſtence, ſmell, and taſte. If we want to inveſtigate it farther, we do it chemically by evaporation, diſtillation, precipitation, putrefaction, or mixture.

Urine is not only various in different conſtitutions and ages, but in diſeaſes. In infancy, it is ſweet; in age, acrid and fœtid; in the jaundice it is bitter; in diabetes, ſweet. Where the ſalts in the urine become ſaccharine, and more liquid is emitted than drank, there

there is a colliquation of the blood and fat, a defect in the natural digeſtions, and a decay of the ſolids, as may be ſeen by the oil on its ſurface. The light amber or ſtraw-coloured urine, ſmooth and equal, without ſediment, about the conſiſtence of well-fermented and boiled beer, is the moſt healthy. The moſt natural urine ſmells offenſive.

When urine does not ſmell, and is tranſparent and limpid, it is owing to its ſhort ſtay in the body, a laxity of the parts, and ſanguification not being ſufficiently performed for giving it tincture or conſiſtence.

The colour, ſmell, and conſiſtence of urine depend on the ſtate of concoction, the liquor drank, and the contractile power of the renal pipes. The more high coloured the urine, and the leſs ſediment it depoſites, the farther it is from a ſtate of concoction. When high coloured and fœtid, it abounds with attenuated volatile ſalt and oil. If groſs, and of a reddiſh, or an icteritious colour, it indicates a redundance of crude recrements, from unconcocted blood, and an imbecility of the ſecretory faculty.

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The urine of the moſt healthy body, by long detention in the bladder, more eſpecially after long abſtinence, or after it has ſtood long expoſed in a glaſs, or after digeſtion in a heat not exceeding that of the human body, becomes red, alkalious, and cadaverous. The feveriſh heat and thirſt that attends the dropſical patient is occaſioned by that change taking place in the waters from their ſtagnation. If in ſickneſs there be large hypoſtaſes, or ſettlings in the urine, when there is no immediate criſis of fever, and, it quickly putrifies when ſet in a warm place, theſe appearances denote the blood is broken, and deficient of its ſpirituous principle.

The enæorema and nubecula, only ſhow a lighter degree of the contents from their ſuſpenſion, and that concoction is yet imperfect. A pendant white cloud towards the bottom of the glaſs is a good ſign; and, if it ſoon becomes a ſediment, it will be a ſtill farther indication of the ſuperiority of Nature. When it exhibits the appearance of a blue ring on the ſurface, that is alſo a good omen. But if urine, when ſhook, retains its froth long, that circumſtance portends a tenacity of the mix-

true,

ture, and a difficult criſis. Putrid urine, while unmoved, is leſs offenſive to the olfactory ſenſe than any other corrupt animalized body. The periodical diſcharge of turbid conſtitutional urine is the effect of a ſecret operation of Nature for relieving the habit of recrementitious matter. If ſuch turbid diſcharge does not happen about the uſual time, ſome artificial evacuation muſt be referred to.

Though the natural ſalts in human urine be neither acid nor alkaline, but, like the ammoniacal, are partly fixed and partly volatile; yet, by violent motion, and heat in the blood, they become highly alkalious and corroſive. By the appearance of urine we learn more of the indications of a diſeaſe, and ſtate of the fluids, than by any of the other ſecretions. When high coloured, it indicates an acid cooling diet to ſubdue the alkaleſcency. We muſt not always, however, give our decided opinion on any one unfavourable phenomena, as a loſt caſe. Nature has infinite reſources, and a multitude of ways to exonerate herſelf. She often will change the moſt unfavourable ſymptom into a good one. She, in many caſes, only

only requires permiſſion to exert her vaſt powers. We muſt be careful neither to do too little or too much, eſpecially in making evacuations, which, either do good or, at a certainty, do much harm.

That dire diſeaſe in the blood, which terminates in the urine, and is called *Lithiaſis*, or a diſpoſition to generate gravel and ſtone, ought to command the attention of every humane Practitioner, who alſo would do well to deliver his opinion on what is moſt likely to prevent, or to ſolve, the ſtone. Every conſtitution has a peculiar tendency to ſome particular diſeaſe; and conſequently many have to this; which, to ſpeak generally, is occaſioned, in the prediſpoſed habit, by living much on groſs, earthy, viſcid diet, and by lying much in a prone poſture, and leading an inactive life.

Laſſitude of body, parched tongue, ſlow latent fever, and ſizineſs of the blood, attends the calculous diatheſis.

Diet and regimen counteract a tendency to this, or any formidable diſpoſition in the blood and ſecreted juices. Either the acid, alkaline, or aceſſant diet makes a great change in the

eſſential animal ſalts, and conſequently upon the whole conſtitution.

The diet fitteſt for thoſe who are ſubject to gravel and ſtone, is the demulcent; ſuch as barley, millet, rice, brown bread, decoction of chick peaſe, honey in water-gruel, milk and water, plain water; and ſuch things as are capable of changing and diſſolving thoſe of the ſaline, ſaponaceous, mucous, and gelatinous kind, or concretions. Whey, butter-milk, aſſes milk, goat-milk whey, during the ſpring, by being attenuant, detergent, demulcent, mitigators of pain, and correctors of acrimony, are proper. Decoction of mallows and ſyrup of violets have alſo a good effect.

If earthy, gravelly, ſaline or ſlimy matter, thoſe cementing principles of the ſtone, are reſident in the habit, they muſt be carried off whilſt in the looſe inadheſive ſtate, and while the paſſages are ſufficiently dilated: the retention of them may give riſe to more complaints than their merely coaleſcing into calculous concretions.

Diuretic medicines, and all tenuous ſubacid liquors, as they quickly paſs the urinary

nary organs, are given to preſerve the ſtream, and with it expel ſlimy and earthy particles, which are too groſs for paſſing off by tranſpiration and before they form into concretions too large for being ſent off through the meatus urinarius.

Medicines of the diuretic claſs are reſolvent; but ſuch gentle ones as precipitate the peccant particles in the maſs of blood, do more good than ſuch powerful ones as thoſe which, by violently forcing the urinary paſſages, inflame, and exulcerate them, without acting upon the ſtone. Wherefore it is that emollient mucilaginous liquors are uſually given, at the ſame time, to ſoften and relax ſtricture, and blunt ſuch ſpiculæ as that of the ſaline of cantharides, which is one of our ſtrongeſt diuretics; and for that very reaſon Dr. Mead preſcribed theſe flies to be taken internally for the leproſy, in which they are very efficacious. They are not, however, to be given in doſes above one or two grains; nor too often, leſt they ſhould cauſe ſtranguary, or priapiſmus, which may happen to be ſucceeded by univerſal convulſions and death; for that has frequently been the effect of an ignorant, wanton,

and laſcivious abuſe of theſe renovating ſtimulants.

The ſpring ſaponaceous vegetable juices have a power of diſſolving ſtony concretions in the body. Thoſe oxen which are killed in winter have, in general, ſtony concretions in the liver, lungs, bladder, or billiary ducts; but thoſe which are killed immediately after a ſpring-feeding on the ſpring juices have none.

Baron Van Sweiten ſays, "a copious and long continued uſe of graſs and dandelion, ſuccory, fumatory, and the like plants, have generally been followed with plentiful evacuation of ſtony or calculous fragments amongſt the inteſtinal fœces; that is, of thoſe generated in the biliary ducts."

Dr. James in his Medicinal Dictionary, ſays, "he has obſerved conſiderable, ſingular, and "ſurpriſing efficacy in decoctions of yarrow, "if uſed a conſiderable time for any calculous diſorders. By the uſe of this ſingle "herb," ſays he, "I have obſerved ſome patients entirely freed from nephritic pains, "to which they had been ſubject; for it is "proper, in caſes of this nature, upon ſeveral "accounts; ſince, beſides its conſolidating

"and

" and mitigating quality, it abounds with a " truly anodyne oil, which, both in colour " and virtue, reſembles that of chamomile; " and is highly efficacious in allaying pain " and ſpaſms."

Cheſneau, ex Zacut. lib. 2. prax. mirand. obſ. 66. ſays, " The uſe of water diſtilled from the green leaves of tobacco, powerfully removes ſtones firmly lodged in the kidneys."

The uva urſi, herb arſemart, the ſeed of common gromwell, and pariera brava, are ſome of the moſt powerful nephritic vegetables yet diſcovered as ſpecifics for effecting looſe, gravelly and ſlimy diſcharges.

As this complaint is occaſioned by crudities, nothing can help the ſtomach to promote digeſtion and aſſimilation ſo much as water. Zecchius, Trallian, and Carolus Piſo, recommend about a pint of warm water to be drank before dinner; affirming, that after the firſt ſtone is diſcharged, none can ever be formed again, if the uſe of warm water is perſiſted in.

Thoſe ſprings which poſſeſs the property of diſſolving and clearing off that cruſt which almoſt

almoſt all the common waters depoſite on our culinary veſſels, and which is particularly viſible on that common veſſel the tea-kettle, becauſe it is ſeldom cleaned, are of great ſervice in diſſolving the calculous diatheſis of the blood.

Mr. S——, aged 73, now living, as he has for many years, near the north gate of Buſhy Park, about ſixteen years ago, was attacked with the gout; which, he ſays, he neither had by hereditary right, nor by exceſſive or intemperate living, though he has always lived well. About ſix years ago, his gout changed its type to nephritic ſymptoms, which he attributes to having drank for ſome years a hard ſpring-water. Five years ago he left off the uſe of that, and drank the water which is conveyed in pipes under the river Thames to Hampton Court palace from Coombe-hill. He, at the ſame time, began to take Caſtile ſoap, in the quantity of two drams a day, which he continued to do till about a year ago, when ſtones, or rather fragments of a ſtone, began to come from him by the urethra, to the number of three, four, five, or ſix in a day. They were thin and concave,

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as if they had been lamellated. Some were ſmooth, and ſome rough on one ſide; but all had ragged edges, and conſequently were voided with conſiderable pain.

I lately went to examine theſe ſtones, and to enquire into the particular circumſtances of this caſe. The ſtones filled a large ſized tea-cup, and weighed eight penny-weights; the fragments weighed from three to eight grains. He told me they weighed much more on their coming away. The query is, whether theſe ſingle ſtones were formed each on its own nucleus, or are they fragments of a ſingle ~~nucleus~~ calculus? I confeſs that, from their form, and every other circumſtance I could collect, I am induced to be of opinion they are fragments of a ſingle calculus, and that the lithontriptic power of the Coombe water and the ſoap diſunited the concrete ſubſtance; and I am the more confirmed in this belief, becauſe no fur will adhere to the inſide of the culinary veſſels wherein Coombe water has been conſtantly uſed; nor have I heard of any one being ſubject to gravel or ſtone who conſtantly uſed that water.

For

For the laſt five years, his common drink has been Coombe water, with ſometimes a little rum or geneva. The latter, however, he was ſoon obliged to leave off, as it proved a moſt painful forcer. We have many ſuch ſprings in this iſland as thoſe of Coombe-hill, which we ought to prize highly, for they are not only preventive, but curative. Natura nihil agit fruſtra.

Hoffman recommends, above all other things, his own anodyne mineral liquor in nephritic complaints, on account of its efficacy and ſoftneſs, when exhibited in ſmall but frequent doſes; which allays the ſpaſms of the primæ viæ, and wonderfully removes the uneaſy ſenſations, the nauſea and vomiting, they occaſion. Some attempt to ſolve calculous concretions by alkaline medicines; ſuch as by the ſhells of fiſhes, oleum tartari per deliquium, potaſh, or ſalt of wormwood; which muſt be done upon the principle of deſtroying ſome acid and glutinous matter on which the concretions are ſuppoſed to form.

Solvents make leſs impreſſion on ſmooth compact bodies than on thoſe which are rugged,

ged, light, and pervious. The calculus with aſperities is moſt troubleſome, and does moſt detriment to the ſenſible membranes.

As to lithontriptic or nephritic medicines, it were a fortunate circumſtance indeed, for the human ſpecies, if an infallible ſpecific remedy were diſcovered which could be received by the ſtomach, and thence carry its active principles through the medium of the blood, without injury to its texture, and act on the calculous body, wherever it might be, with unabated force; or, if ſuch a medicine could at once be introduced into the urinary bladder, as, without injury to its coats, could there act on the formed calculus with ſuch force as to break it down into minute particles. There may be ſuch remedies; there probably are remedies for all diſorders. There was a time when even the ague and lues venerea were deemed incurable.

When the conſtitution has been much haraſſed by nephritic paroxyſms, the patient muſt endeavour to derive content from the temporary alleviation, and perſevere in preſcribed diet and regimen; for experience too fatally evinces, that even extirpation is far

from being radical; nothing being compleatly ſo, that does not totally remove the primary efficient cauſe.

Moſes Waitt, Eſq. late of Ham-common, in Surrey, in the year 1782, at the age of 72, underwent the operation of lithotomy twice within the ſpace of that year. Soon after the ſecond ſtone was extracted, a third was diſcovered; when, life becoming thus uncomfortable, he rejected all prophylactic means, and fell, as expected, within two years from the formation of the firſt ſtone. So far was his blood from being attenuated by phlebotomy, that it always was more ſizy—A circumſtance I mention to ſhow in what a ſhort time a ſtone will engender, when the blood is once vitiated by the calculous diatheſis, eſpecially in the aged. The firſt ſtone, if I am to judge by the indicating ſymptoms, formed in about three months. Mr. Pott having extracted the firſt ſtone, and Mr. Bromfield the ſecond, I can have no ſuſpicion that any fragments of either remained to become a nucleus for the baſis of a new formation.

Though, from the preternatural ſtate of the blood, morbid affections are ſeen in the ſecreted

creted fluids; yet the urine itſelf, in its natural ſtate, has great ſanative virtue.

A Gentlewoman of Kingſton, turned of 40, whoſe conſtitution was much impaired by a conſtant gnawing pain at the pit of her ſtomach, bad digeſtion, great and irregular flow of the catamenia, difficult reſpiration, latent fever, ſore breaſts, frequent loud eructations, irregular appetite, interrupted ſleeps, and inceſſant thirſt, applied for my advice, after ſhe had been thus afflicted for ſeveral years, and ineffectually attended by the Faculty. Soon after I had preſcribed for her, ſhe abſented herſelf for about three weeks; but then returned with an appearance of joy that ſeemed little leſs than frantic, to tell me, ſhe was perfectly recovered by drinking a cupful of her own water once a day on an empty ſtomach; which ſhe did by advice of a neighbour, who, by the ſame means, had been relieved of an habitual obſtinate colic of many years ſtanding, and attended with ſeveral ſimilar ſymptoms.

She ſaid it had operated gently by ſtool, and ſtrongly by urine; that it had increaſed her appetite, expelled wind, abated pain, and in-

vited ſleep. Her countenance was clear and healthy.

Urine is not only aperient, diuretic, attenuant, detergent, carminative, and ſtomachic, but, externally applied, is diſcutient and ſedative. Boerhaave made much uſe of it in fomentations and in clyſters.

CHAP. VII.

On Evacuation by Bile.

THE bile promotes the periſtaltic motion, that is, ſtimulates the fibræ matrices of the inteſtines to perform their animal functions. It renders the alimentary fluid homogeneal, and fit to paſs through the proceſs of animalization. The bile has many qualities, properties and virtues. Haller, in his Primæ Lineæ, ſays, "Impedita a fluxu bilis ad inteſtina, deſtructa veſicula animalia robuſtiſſima interpaucos dies periſſe." Etmuller, and, indeed, many others, ſpeak of the great importance of this preſerving fluid; and, no doubt, if it is not allowed to paſs on uninterruptedly in its due

due courſe after it is ſecreted, life cannot long exiſt: but there are inſtances of patients recovering after there had been no ſecretion of bile for weeks, nay months.

In 1784, a Gentleman of Kingſton, between 20 and 30, had a ſuppreſſion of urine. I was called in on the third day. He had been copiouſly bled, and taken liquid laudanum in very large quantities. His blood was looſe, rarified, florid, and frothy, without any inflammatory buff or ropy cruſt; a ſtate the blood is always found to be in after having taken much opium.

I ordered a julep ex ſpirit. minderer. aq. puleg. ſpir. nitr. dulc. extract. cicut. ſyr. althæa, to be taken in doſes of two or three ſpoonfuls every quarter of an hour. This, with the aſſiſtance of the *ſemicupium* and *terebinthinate clyſters*, occaſioned him to void more than a pint of urine within the hour; and, in a few hours more, to empty his bladder, and drop into a profound ſleep; from which he awaked compoſed and eaſy, and continued ſo all the next day. The apprehenſions of his friends, however, induced them, in the mean time, unknown to me, and before the full

full effect of my mode of practice could poſſibly be ſeen, to ſend for another Phyſician, to, what is termed, aſſiſt. When he came, that Gentleman and the Apothecary who had been called in firſt, thought proper to repeat the bleeding, and to reſume the laudanum. Within thirty hours after this, the patient's complaint changed to a remitting fever and tympanitis, or dry-dropſy.

The patient was now put on a courſe of deobſtruent medicines, as calomel and rhubarb; which was perſevered in day after day, and week after week, even though the ſymptoms increaſed, till ſingultus, thruſh, flux, had almoſt overpowered him.—It was then thought neceſſary to entreat that I would again reſume my endeavours to relieve him from his extreme danger.—In compliment to the Profeſſion, I now reſolved to endure, as long as poſſible, the premature introduction of a Gentleman whoſe advice I, however, was determined ſhould do no harm, and therefore forbade his diſmiſſion. But, ſo ſoon as I had relieved our patient of his moſt urgent ſymptoms, and as I knew he had been more than ſufficiently evacuated, I ordered the Peruvian

bark

bark to be given during the remiſſions of the febrile paroxyſms, to check the fever and putrid proceſs, and give tone and contractility to the muſcular fibres. Still farther to help us, I availed myſelf of the opinions of Boerhaave and Boyle, who ſay, relief for the tympanitis is equally given by paracenteſis as in aſcitis. I alſo had ſeen Cheſelden's account of a cow having been ſaved by a puncture made in the belly, when ready to burſt by the expanſion of vapor. The operation was, I knew, at that ſtage of the complaint very ſafe, and might have been an uſeful one: my opinions, however, were, once more, over-ruled by the Phyſician and Apothecary.

Finding myſelf thus hampered and reſtrained from ſaving, as I thought, a valuable life, without ſo much as one ſingle reaſon being aſſigned for the oppoſition, I requeſted of the family that a third Phyſician of eminence ſhould be called in as umpire. This being immediately granted, he and I agreed *unâ vôce*, inſtead of perſiſting in the purging plan, to give him the red Peruvian bark, in frequent and large doſes, during the remiſſions of his fever, which then at once gave way; his immenſely

menſely diſtended belly ſubſided; a ſecretion of bile took place, after being upwards of ſeven weeks ſuppreſſed; and he perfectly recovered that good health he has enjoyed ever ſince.

About three years ago a ſervant maid at Kingſton, between 30 and 40, of a thin weakly habit, was attended by the ſame Apothecary till ſhe was obliged to leave her ſervice, and he, himſelf, urged her to ſeek relief in an hoſpital. The miſtreſs ſhe formerly ſerved, however, having been my patient, recommended her to my care. I found her exceeding weak, much oppreſſed in her breathing, her belly enormouſly expanded with tympanitis, and her monthly terms obſtructed. She had been copiouſly evacuated. I purſued likewiſe with this patient the oppoſite method, and in ten days or a fortnight, ſhe returned again to her former miſtreſs's ſervice; where ſhe now is, and has been ever ſince.

Theſe two recent and well known facts, I relate for the purpoſe of aſcertaining two or three very material points.

Firſt, that though no bile is ſecreted, Nature

ture may nevertheleſs exiſt for a much longer time than is generally ſuppoſed.

Secondly, that a tympanitis, though deemed more difficult to cure than a humid dropſy, is ſtill within the reach of art and judicious management; and that evacuants are not to be too much depended on, but are really deſtructive when much perſiſted in.

Thirdly, that if we ſubdue the leading ſymtom, the concomitant will yield, as was the caſe in theſe two inſtances.

When the ſecreted bile is obſtructed in its excretion into the inteſtines, the glands of the liver, biliary-ducts, gall-bladder, and aperture of the pores being thereby greatly diſtended, it paſſes through the lymphatic veſſels into the blood, and tinges the ſerum; that tinges the ſkin, nails, and tunica albuginea of the eyes; and is attended with all the ſymptoms of jaundice.

Calculi in the neck of the veſica-fellis, or gall-bladder, obſtruct the excretion of bile; but the ſtone does not form in that viſcus ſo very often as many Practitioners are apt to imagine. Similar ſymptoms will ariſe from other

cauſes; ſuch as viſcidity of the bile, which obſtructs the biliary ducts; or, from ſpaſmodic conſtriction of the muſcular fibres of the duct, which will draw the ſtomach and whole abdominal viſcera into conſent, till a paralyſis enſues.

Bilious concretions are formed by a repletion of viſcid bile when at reſt in the gall-bladder. The weaker the patient the more coheſive the bile from the attraction of the bilious ſalts.

Such ſaponaceous diet as honey and ſugar, as well as the attenuating juices of fumatory, ſuccory, vipergraſs, dandelion, goatſbeard, whey, tepid water, and the neutral ſalts, reſolve inflammatory concretions: the alkaline reſolve the glutinous. Mellow white wine meliorates the preternatural acritude of the bile that is productive of gripes, colic, &c. Honey tempers and nouriſhes the bile. It is antiſeptic, for it will preſerve vegetables.

The greateſt part of our knowledge of bile we owe to Van Helmont. Although this juice ſubdues acids, it is neither alkaline, fixed, nor volatile; but, by the oleaginous and ſulphureous corpuſcles diluted in its phlegm forming

forming a balſam, it ſheaths, incides and protects the fluids.

From a defect in the ſecretion of the bile there is a defect in concoction and diſtribution; whence colic, ſpaſms, tympanitis, hypochondria, &c. From an effuſion, enſues diarrhœa, hepatic flux, &c.

In order to ſupply the defect of bile on an emergency, we muſt look for its moſt ſenſible quality, which is ſo bitter that one drop of it communicates bitterneſs to half an ounce of water. Experiments ſhow that an acid, earthy, alkaline and ſulphureous commixture forms a bitter; and bitters have been conſidered as a ſubſidiary bile; but the vegetable bitter comes far ſhort of ſupplying its defect in the ſyſtem. Perhaps the extract of centaury comes neareſt to it.

Stagnation, profuſion, or vitiation of the bile occaſions many a formal inveterate diſorder, that does violence to the conſtitution.

Hippocrates thought lymph and bile had a great ſhare in the generation of calculous matter. If they have, may we not reaſonably ſuppoſe they alſo contribute to the formation of gouty calculi which they ſo much reſem-

ble? Thoſe who are afflicted with this diſorder are much annoyed by lymph and bile.

Lymph and chyle are attenuated by volatile or fixed ſalts, pungent vegetables, ſaponaceous ſubſtances, temperate air, or motion; and are congulated by ardent ſpirit, ſpirit of vitriol, or cold air. Acidities in the primæ viæ render the bile inactive.

Bile is aperient, detergent, diſcutient, ſtimulant, antiſeptic, and ſedative. Boerhaave ſays, "the bile of animals, though but little uſed in medicine, is one of the moſt efficacious, if not abſolutely the beſt attenuant, of the animal fluids."

Doctor Arbuthnot obſerves, that the milk on the ſtomach of calves, which is coagulated by the rennet, is again diſſolved and rendered fluid by the gall in the duodenum.

Boerhaave found a drop or grain of the extract of the gall of an eel a moſt powerful ſuccedaneum in defect of human bile, and particularly in diſſolving curdled milk on the ſtomach of ſucklings. —— It would be endleſs to enumerate all the virtues aſcribed to bile, both by ancient and modern writers. I have myſelf frequently directed

the

the uſe of it with bitter herb decoction in clyſters; and the umbilical region to be fomented with it, for diſlodging of worms from the bowels, and with good effect. I have frequently cured the pſora, or itch, by a liniment compoſed of bile, oil, ſulphur and nitre.

However it is not bile or urine only, but every diſtinct and ſeparate part of an animal body, that ſerves, more or leſs, to make up the catalogue of the *materia medica.* The very viper that poſſeſſes the moſt virulent animal poiſon, is not only an uſeful, but an highly reſtorative diet. Perhaps there is no better medicine for removing ſpecks or ſloughs on the eyes than *oleum viperinum.*

CHAP. VIII.

On Evacuation by the Catamenia.

THE catamenia are an evacuation of mere blood, appointed by Nature to flow monthly from the uterus. They vary with the climate. In this Iſland, they, for the moſt part, commence at fourteen or fifteen; ſeldom

dom later than eighteen, or continue longer than fifty. If they come early, and are profuſe, they ceaſe early.

About that critical period when the menſtrual diſcharge is taking its final leave, there is ſome ſtruggle, more or leſs, in every habit, and more eſpecially in thoſe of the ſanguineous habit, who have been accuſtomed to copious menſtrual, naſal, or hœmorrhoidal diſcharges, or other increaſed excretions.

If the catamenia happen to return after the uſual final period, as they ſometimes do, they are occaſioned by ſome inciting cauſe; which, if not removed, will be fatal. Nature is more eaſily and more effectually aſſiſted before than after this morbid phenomenon appears.

It ſometimes happens that the catamenia will not flow by the vagina, but make choice of ſome other emunctory; as that of the mouth: however, if no untimely aſtringents are obtruded, no ill conſequence will happen: the error loci muſt be attended to, and the habit rectified, before the next expected return. I have had many of theſe caſes, but here ſhall only notice two of them.

A few

A few years ago I was ſent for in the night to a Lady of the ſanguineous habit about 30, who was diſcharging great quantities of blood from her mouth, which had much alarmed the apothecary, who had been forty years in practice. I preſently perceiving it was only the *catamenia*, took my leave by forbidding the uſe of medicine for two or three days, in which time, as I foreſaw, ſhe got well. I then ordered her body to be kept eaſy and ſoluble, by a doſe occaſionally of pilul. rufi; and two days before the next expected monthly return to take three doſes a day of ſaffron and flowers of ſulphur: (about gr. 8. or 10. of each for a doſe) which ſhe did. In conſequence thereof the catamenia again flowed eaſily in the natural channel, and ſhe has been perfectly regular ever ſince.

I was ſoon after ſent for to relieve another Lady between 30 and 40, whoſe catamenia had taken a ſimilar courſe by the mouth. The apothecary miſtaking it for an hœmoptyſis had bled her copiouſly, and thrown in ſome reſtringent medicines; which, as naturally might be expected, had almoſt ſtifled her, inſomuch that it was with the utmoſt difficulty

culty ſhe could reſpire. Her pulſe wavered, and was low, and ſhe had frequent deliquiums. I directed her to be cheriſhed by white wine whey, chicken broth, &c. and, when faint, to take ſome cordial drops, as tincture of caſtor, ſpirit of lavender, &c. She recovered at that time, and became regular; but having been, for ſome time before this caſual incident, in a hectical ſtate, ſhe died a few months after.

As the catamenia flow from thouſands every day in every month, the common idea of their depending upon, or being regulated by the lunar changes, is evidently a vulgar error: and, as moderate bleeding immediately before their expected flow, neither retards their appearance, nor diminiſhes their quantity, but, on the contrary, cauſes them to flow more eaſily, and more abundantly, they therefore cannot be ſaid to depend on a general plethora. As a very large ſpontaneous diſcharge of blood by the hœmorrhoidal veins, or noſe, ſuppreſſes, or conſiderably diminiſhes them, copious venæſection, either before or on an undue return after the uſual period of their finally ceaſing, has a ſimilar effect in the plethoric habit.

Menſtruation, impregnation and parturition are ſome of thoſe ſecret operations of Nature, which we cannot inveſtigate. The ſuſpenſion of the menſes, during the time of geſtation, and that of lactation, evidently ſhow, the intention of Nature is to preſerve the blood until the maternal duties are performed.

The cachectical ſymptoms incidental to the ſex from a morbid ſuppreſſion or inordinate profuſion, are many. The blood acquires new qualities, habitudes, poſitions, determinations and relations. Mania is not an uncommon effect of a ſudden ſuppreſſion. A juſt idea therefore of the beſt means of reſtoring this natural diſcharge, or ſuppreſſing its exuberance, is of the utmoſt conſequence. The medicines and methods employed for that purpoſe are ſuppoſed to have a power of opening and expanding the extreme arterial veſſels of the uterus, and giving force and momentum to the blood.

To effect this we muſt carefully attend to the age, productive cauſes, ſtate, and condition of the conſtitution, as no two habits are in all reſpects alike, and therefore may require a different mode of treatment. Though

we cannot ſpeak particularly to every individual's caſe, yet, we can ſpeak decidedly to certain general characteriſtic ſigns; as, for example, if the patient be cold, lax, feeble, pale, and ſpiritleſs, tonics, as ſteel, aromatics, bitters, and the cold-bath, are proper. Cold to a certain degree heateth, wherefore the cold-bath rather promotes than reſtrains hœmorrhages. Sea-bathing has wonderful effect in removing morbid ſuppreſſed menſes, when occaſioned by debility.

If there be heat, plenitude, denſity of the blood, rigidity of the vaſcular ſyſtem, and the ſuppreſſion obſtinate, potent deobſtruents and bleeding in the arm or foot, with ſuch thin diluting liquids, as will relax, attenuate, and expel the ſtimulus, and take off ſtricture of the blood-veſſels, are required. Tepid baths, and light air are cooling becauſe they relax and expand; wherefore, the attrition that cauſeth heat and compreſſion is proportionably leſs. The rare is cooler than the denſe fluid.

If a defect of the catamenia be from inanition, a more plentiful ſupply of nutritive juices, analeptics, and cordials, as wine, that give

give vigorous action to the organs of digeſtion, and enrich the blood, becomes neceſſary.

If the ſuppreſſion be owing to a ſluggiſh viſcidity of the fluids, attenuants, ſtimulants, volatiles, exerciſe, as dancing, and temperate air, remove the obſtruction, and ſubdue the cauſe.

If the ſuppreſſion proceeds from ſpaſmodic conſtriction, emollient and gentle aperient clyſters, pediluvium, ſemicupium, friction, electricity, ſitting over warm ſtimulating volatile ſteams, antiſpaſmodics, and mineral waters, leſſen the vis reſiſtendi of the veſſels, and promote a flow.

Diſquieting paſſions, or violent emotions of the mind, diſturb the circulation of the animal fluids. The mind is to be ſoothed and quieted; but it is a difficult taſk to harmonize the mind before the cauſe of its diſquietude is removed.

An ineffectual uſe of emenagogues, however, is not to be obſtinately perſiſted in. I never knew a patient ſo far reſtored as to be perfectly regular, and enjoy full health, who had been morbidly obſtructed for ſix months: nor do I think it can be proper, after ſo long an

obſtruction, to force the uterus. On ſuch occaſions, I have generally enjoined my patients to pay a proper attention to the non-naturals; to the uſe of mineral waters, and to drink ſometimes the tea of ſuch ſimples as pennyroyal, white horehound, chamomile, feverfew, &c. The habit in general is to be attended to for preventing cachexy, which is much to be dreaded.

During the flow of the catamenia, but very few medicines are admiſſible. I have never ventured to preſcribe farther than ſome gentle aperient clyſter, leſt, by incommoding the ſtomach and ruffling the habit, the natural diſcharges ſhould be diverted from their proper courſe, which is eaſily done at this criſis.

A profuſio menſium, from a depravity of the menſtrual blood, and laxity of the uterus, is alſo attended with many inveterate cachectical ſymptoms. When the impurity of the juices which have thus depraved the blood are corrected, aſtringents may then be uſed to brace up the lax tone of the vaſcular ſyſtem. Reſt and the dry diet muſt alſo be attended to. The ſame cautions are neceſſary for the cure of the fluor albus, a diſcharge of a chylous matter, ſeparated by means of the glandulous ſub-

ſtance

ſtance of the uterus. Women of tolerable ſtrong conſtitutions may endure this diſcharge a long time; but if it is incautiouſly ſuppreſſed before the antecedent cauſe be removed, leucophlegmatia, dropſy, ill-diſpoſed ulcers, or other cachectical ſymptoms, will enſue.

CHAP. IX.

On Evacuation by the Semen or Sperma.

THE Semen, or vivifying principle, ſecreted in the teſtes at the time of puberty, like the ſpeck of entity in the ſeed or pollen of the unembrionated plant, expands and unfolds the myſtery of its nature in the formation of the fœtus, whoſe birth is to preſeve both the mental and corporeal reſemblance of thoſe from whoſe ſemen its exiſtence is derived. It, however, is not our preſent intention to ſay more on the ſubject of generation than merely to ſhow the importance of that ſpirituous balſamic part of the blood quod vitam impertit & partes confortat. A moderate emiſſion of ſemen from the full grown, warm, and athletic

letic habit, by alleviating Nature, preſerves health, and therefore to ſuch becomes a neceſſary evacuation. Semen, by long retention, loſes much of its ſtimulating active power: but an immoderate uſe of venery, is irretrievably injurious: it weakens the nervous ſyſtem, leſſens innate heat, and conſequently the prolific power and concoctive faculty. If the blood is deprived of this nouriſhing, animating principle, the ſight, underſtanding and memory, will be thereby impaired; and tremor, debility, relaxation, dejection, tabes dorſalis, convulſion and apepſia will enſue.

As temperate venery has ſalutary effects on the male, it muſt, cæteris paribus, have the ſame on the female: it prevents and cures thoſe chloretic ſymptoms which ariſe from a morbid ſuppreſſion of the menſes, and reſtores that natural diſcharge, by warming and invigorating the blood: but exceſs may bring on weakening ſymptoms; ſuch as glandular diſcharges, fluor albus, and the cachectic habit. If the uterus be much debilitated, an impotent reluctance to venereal enjoyment is thereby induced, and the power of conception and retention is loſt.

As blood is not generated ſo faſt after the meridian of life as in youth, native heat, the inſtrument of vital action, diminiſhes, and the ſpermatic veſſels cloſe for want of good and active blood to diſtend them. Venereal incitements are then leſs, for it is the copious ſecretion of the ſuccus genitalis that prompts to a diſcharge. The veſiculæ ſeminales becoming leſs turgid, there is leſs danger of a ſpermatic plethora, or inflammation, or ſwelling of the veſſels of the teſtes; or of an overſtraining of the nerves. I have, it is true, had patients, whoſe imaginations, even when far advanced beyond that meridian, were ſo much agitated by venereal dreams, as to occaſion involuntary nocturnal emiſſion: that, however, was not always produced by a plenitude of ſalutary juices in the veſſels, but oftener by ſome morbid inciting cauſe; which, by thus depriving the body of its animating powers, enervated the ſyſtem, and rendered the balance between the ſolids and the fluids unequal. This morbid excitement was unnatural, and conſequently to be checked, by correcting the fault in the habit. If the cauſe is debility and laxity, as it often is, a long continued

uſe

uſe of chalybeate waters, and the cold-bath, will be uſeful.

Attention to the nature and effects of an exceſs of this excretion, whatever may be the cauſe, is no leſs neceſſary than that which is requiſite to the ſtillicidium virulentum from the glands of the urethra in men, or the vagina uteri in women, a coitu impuro.

The ſatyriaſis in men and furor uterinus in women, are affections that ariſe to a ſpecies of mania. Of the latter I have had ſeveral under my care: of the former but one, in whom the characteriſtic ſigns were remarkably ſtrong. He was in his eighty-ſecond year and married when he was firſt ſeized with a hemiplegia, of which he got better, but very ſoon after was effected with a ſatyriaſis, when his behaviour was truly ludicrous, and he died ſoon after.

CHAP. X.

On topical Evacuation by bleeding.

TOPICAL EVACUATIONS are contrivances to aſſiſt the vital principle which governs

governs the ſtadium of heat in the blood for preſerving its natural motions and due conſiſtence. Evacuation, by phlebotomy, is neither elective nor disjunctive, but ſuddenly diſcharges the innoxious with the noxious principles. Veſicatories and iſſues draw off that which has ſeceded or is diſpoſed to ſecede from the general maſs.

The whole intention of bleeding is to diminiſh the redundancy and reſtrain the impetus of the accelerated maſs and ſtimulating power, that the inflammatory diatheſis, or inordinate coheſion, may be broken through, for refrigeration, ſeparation, and attenuation to take place; that a revulſion may be made from a morbid part; and that reſpiration, the pulſe and vital actions, may become regular, equal and free.

Bleeding is performed in imitation of the natural ſpontaneous excretion or eruption of blood from the noſe, hœmorrhoidal veins, anus, breaſts, or uterus, which prevents or critically terminates acute diſeaſes.

Bleeding is practiſed with moſt ſucceſs in cold climates, where the inflammatory diatheſis and acute diſeaſes prevail; but exceſs in every

climate is to be avoided; for, by occaſioning an abatement of native heat, numbneſs, paralyſis, hyſteric affection, vertigo, blindneſs, tremor, debility, &c. may enſue. Immoderate ſpontaneous effuſions of blood, are ſucceeded by dangerous convulſions, delirium, and lypothymia, or ſudden failure of animal and vital actions.

A pauper—a coal-heaver--was lately brought to me by two others, who ſupported him on his feeble legs, and told me that the poor creature had been blooded ten times in a few days by the APOTHECARY, who was now diſpleaſed with him for not ſubmitting tamely to the lancet the eleventh time. This was for a cutaneous complaint, in which the lancet ought not to have been uſed at all. But it is not my intention to comment here on ſuch practice; it needs none. I ſhall only ſay, that, by the very oppoſite method, he was recovered. By living on a generous diet, increaſing that gradually, and daily drinking a few glaſſes of port after dinner, his impoveriſhed blood was enriched and increaſed, and his enfeebled ſolids filled and ſtrengthened.

Since

Since the powers of life are ſooner diminiſhed by bleeding than by any other evacuation, it is evident that no ſuch evacuation ſhould ever be made but when it is indiſpenſably neceſſary. It ſhould be moſt cautiouſly conſidered, that blood, and what Hypocrates calls animal ſpirits, were originally united by Nature to flow in one ſtream together; and therefore, that, if much blood is taken away, much of the vital principle muſt be loſt with it: the remainder will conſequently be weak and incapable of giving tincture to the new-formed chyle. The blood is *cuſtos vitæ*. In ſcriptural language, it is "the ſeat, the chamber and magazine of life.—The vital ſtrength rideth in the chariot of the blood." The doctrine of that great Pythagorean philoſopher, Empedocles, placed the exiſtence of the ſoul in the blood.

The rational proficient is ever ſparing of this moſt precious fluid; whereby he is the moſt ſucceſsful in effecting firm and laſting cures, eſpecially in his attendance upon infancy and age. The great error of taking away blood, almoſt in any quantity, from the aged and gouty, or aged ſcorbutic patient, or from thoſe

of weak nerves, can never be compenſated. But, however much I may decry exceſſive and indiſcriminate bleeding, I would not be underſtood to unite with Eraſiſtratus, Helmont, Paracelſus, and their followers, who totally condemn the practice of bleeding on any occaſion whatever; for we every day ſee that where a ſedentary life, and high living, or a ſuſpenſion of ſome accuſtomed evacuation, has occaſioned a redundance of blood, which is apt to bring on ſcurvies, infarctions of ſome of the viſcera, lethargic, or apoplectic diſorders; or where there is an aſthmatic difficulty of breathing that threatens ſuffocation; while ſufficient ſtrength and energy remains, a ſmall or moderate quantity of blood, when drawn off with a prophylactic intention, may aſſiſt and give relief even to the moſt aged. In the prime of life, if the patient is ſtrong, plethoric, his diſeaſe acute, with high and quick vibrating pulſe, inceſſant thirſt, tight-bound cough, and in danger of hæmorrhage, the propriety of bleeding, and even repeating it, is obvious to the meaneſt capacity; but where the pulſe is ſoft and rather languid, the heat moderate, though attended with the uſual

ſympto-

ſymptomatic cough, as in meaſles or influenza, the lancet is wiſely with-held, or but ſparingly uſed.—Enough of fever is always to be left to conquer the morbific cauſe. Bleeding is far from being, on all occaſions, a neceſſary prelude to the treatment of a diſeaſe. In ſhunning the Scylla of fever, we muſt not run upon the Charybdis of palſy, dropſy, or convulſions. Bleeding on the attack of ſome palſies would confirm the complaint. By increaſing the fever till it terminated in a profuſe ſweat, I have had the pleaſure of ſeeing ſeveral of my paralytic patients reſtored to perfect health. A ſupervening fever is often the happy termination of many lurking complaints.

A palſy does not ſo often happen from plenitude of blood, as from loſs of its quantity, impurity of its ſerum, and a diſturbance of the mind. When it is occaſioned by a redundance, evacuation is then not only needful but muſt be immediate.

Howſoever neceſſary bleeding is in pleuriſy and peripneumony in the firſt ſtage of theſe complaints, yet if it be too copious it will hinder expectoration and diſcuſion of the inflam-

flammatory matter, and lay a foundation for catarrh, annual coughs, and depoſition of ſerum and lymph on the lax glandular organs.

If there ſhould be a plethora in the ſanguineous conſtitution during pregnancy, the drawing off a ſmall quantity of blood, in the ſecond or third month, will contribute to preſerve the health both of mother and fœtus. But abortion, and all the dreadful conſequences attending it, may be occaſioned by unſeaſonable bleeding and purging.

In the ſpring ſeaſon when there is an orgaſm of all Nature, and every thing in animal and vegetable evolves, opens and expands, hœmorrhages enſue, that reſemble a redundance of blood. But it muſt be obſerved, that, though bleeding may be abſolutely neceſſary in ſome vernal, acute diſeaſes, yet, the frequent repetition of it increaſes plethora, and induces cacochimy. The pulſe, which in general is the Phyſician's beſt guide for the uſe of the lancet, is not always to be depended upon in ſpring.

As it is the quality, not the quantity of blood, that is the cauſe of chronic, malignant and putrid diſeaſes, the lancet can ſeldom be uſeful

uſeful in their cure; for, as the ingenious Dr. Shebbeare ſays, in his Practice of Phyſic, "whatever leſſens the attracting power of heat, expedites the danger, and bleeding manifeſtly effects that."—In this inſtance, I think it is much ſafer to depend on Diemerbroek, than on Sydenham. Thoſe who proteſt againſt bleeding in the *Plague*, and ſay it is not only dangerous, but deadly, muſt, in my opinion, be right.

The preſent faſhionable mode of preventing exanthematous, or puſtulary eruptions; ſuch as the varioloſe and morbilloſe, from riſing to a degree of putridity, by the antiphlogiſtic aperient plan, may be ſafely practiſed in the preparative or early ſtage; but not ſo when Nature is buſily employed in the work of excretion; or in the exacerbation of fever. A ſudden retroceſſion of the eruptions, even at the height, is attended with ſtruggle and ſometimes with danger.

As the veins are impatient of vacuity, they invite humours promiſcuouſly from every part, even the ſeparated morbific matter, from the ſuperficies of the ſkin, to fill up the place of the emitted blood. On this principle,

bleeding,

bleeding, in the putrid malignant fever, generally ſpeaking, is unwarranted; yet there is no rule without exception: a ſymptom or circumſtance may appear to render the loſs of a ſmall quantity neceſſary, as was the caſe in the ſynochus putris that prevailed in the years 1772 and 1773, when the drawing off two or three ounces in the beginning, was very uſeful for mitigating an inflammatory ſymptom that terminated in ulceration of the throat; but even in that inſtance, the rational Practitioner was guided by other ſymptoms and circumſtances.

In the gout, phlebotomy, by weakening the ætherial animating principle that preſerves and purifies the blood, render the diſorder more irregular and more inveterate. Nevertheleſs, though general bleedings are inadmiſſible, yet topical, as by the leech for the local affection, ſuch as gonagra, or chiragra, has relieved.

It is not ſufficient to attend only to the nature, quantity, and quality of the blood, but to the manner of its being drawn. Dr. Boerhaave ſays, "three ounces of blood diſcharged, in full ſtream, affords more relief than ten diſtilled

tilled in drops." The blood diſcharged ſuddenly by full ſtream in the ſtrong and plethoric habit, no doubt, is beſt; but where the patient is delicate and weak, and liable to ſwoon, I prefer the ſmall orifice. A violent hœmorrhage, in general, occaſions fainting. The poſture the patient's body is in during the operation, is likewiſe a conſideration of moment. Profeſſor Cullen ſays, "a ſmall quantity of blood drawn in the recumbent poſture, has more effect than a much greater quantity in the erect." If this poſition of the body occaſions leſs reſiſtance to the weight of the blood propelled from the heart through the ſuperior ramifications of the *aorta*, or the attraction of gravitation has leſs power at ſuch time over the motion of the animal fluids, the patient muſt conſequently be relieved from the preſſure that would occaſion a ſyncope or fainting.

For local inflammatory affections, different methods have been deviſed for this evacuation. For an immediate relief of the membranes of the cranium and brain, blood is generally taken from the jugular-vein: but if it is taken from the veins of the limbs, a greater quanti-

ty is required to be drawn off before the head can be relieved.

Arteriotomy, for this ſame affection of the head, is ſometimes performed on the temporal artery; and is more effectual than venæſection; and it would be much oftener practiſed, were it not for fear of too great an effuſion of blood, or of the formation of an aneuriſm: but arteriotomy may be performed with great ſafety, on the forehead or temples, and has the ſuffrage of the greateſt Phyſicians and Surgeons, both ancient and modern, to recommend it. Indeed it was a common operation among the Ægyptians, who performed it as frequent as they did venæſection, from a very high opinion they had of its relieving the ſuperior parts of plethora.

Cupping with ſcarification is ſerviceable in vertigo, cephalalgia, mania, epilepſia, convulſions. To reſtrain a profuſion of the menſes, Hippocrates recommends a large cupping-glaſs to be placed under the breaſt; and, for a quinſy, a large cupping-glaſs under the chin, and opening the ranula vein under the tongue. Themiſon's ſect applied cupping-glaſſes immediately after leeches, to draw off more blood than

than the leeches could ſuck. Cupping-glaſſes not only draw off blood, but, with it, the local venom of animals and inſects; and relieve a corrupted or gangrened part after a wound or inflammation. They relieve efflorescences, or defedations of the face, from a hot conſtitution, by deriving the blood from the part, and conſequently the heat, and allowing a due motion, that preſervative of the fluids againſt ſtagnation and putrefaction.

For prolapſus uteri, Boyle ſpeaks highly of the utility of a large cupping-glaſs applied to the navel; but not to ſtay on above a quarter of an hour, leſt it injure the part.

When a patient cannot ſafely ſuſtain the loſs of any blood, cupping is uſed without ſcarification.

The practice of cupping was much in uſe amongſt the Ægyptians. From its effects it may be ſaid to be the reſtorer of defective life and nutrition.

Upon the principle of revulſion, the vena ſaphena in the foot is opened, and ſometimes has the happy effect of relieving ſuppreſſed menſes, head-ach, tooth-ach, &c.

For ſuch local inflammatory affections, as ophthalmia, hœmorrhoids, rheumatic tumefactions, or inflamed ſwellings of the limbs, and nephritic, hypochondriac, and iſchiadic pains, leeches on or near to the part give relief: they alſo are more convenient than the lancet for infants, or little children whoſe veins are not conſpicuous; but the diſcharge by them may be exceſſive, as they are apt to ſtrike an artery, unleſs a Surgeon is preſent to direct where they may fix without danger, and, if needful, to ſtop the bleeding. Hoffman ſays, "I have ſeen malignant ulcers and fiſtulas produced by leeches applied to the blind piles." But much depends upon the ſtate of the habit.

Themiſon is ſaid to be the firſt Phyſician who takes notice of leeches. Hippocrates never once mentions them.

The practice of phlebotomy, according to Pliny, was originally taken from the hippopotamos, which, when full of blood, ſtrikes his leg againſt ſome ſharp point, and thus relieves himſelf by bleeding.

CHAP. XI.

Of Evacuation by Bliſtering.

THE moſt common veſicatory is cantharides. The heat of the body gives motion to the volatile active part of theſe flies, which being abſorbed, attenuates, relaxes and ſtimulates ſo ſtrong an action of the nerves of the cutis vera as to produce a true inflammation. The great afflux of humours to the ſtimulated part, ruptures the veſſels which connect the cuticle and true ſkin, and extravaſates between them a conſiderable quantity of ſerous fluid. Part of the morbid ſerum is thus attracted to the ſuperficies of the body, the torpid ſolids are excited to more frequent oſcillations, and energy is given to the whole nervous ſyſtem. By thus reſtoring the circulation, relief is given to the vital powers that are oppreſſed, the ſecretions are promoted, and the morbid part is rendered leſs ſenſible to the afflicting cauſe. The ſentient principle being diverted to the new inflamed part, and a derivation obtained, obſtructions are removed, pain is abated, and preternatural tenſion and ſpaſm taken off. Thus bliſters are ſtimulant, evacuant, derivative, and ſedative.

As ſtimulants to the living ſolids, they are very efficacious; but if their power did not extend beyond that, they would do harm in a fever, which is an increaſed action of the heart and arteries.

As evacuants, their virtue goes beyond the quantity of fluid matter they diſcharge; for much greater diſcharges than what is made by them, are promoted by other cauſes, but without ſuch relief, as is given by the bliſter, to a morbid habit.

As derivatives, when Nature is endeavouring to depoſite noxious matter on a remote part, a veſicatory haſtens on that derivation of the peccant matter which gives relief to the patient.

They are ſedative, by ſubduing ſpaſm or painful ſtricture. On the like principle it is that heat alleviates the excruciating pain of rheumatiſm and tooth-ach.—Be the theory of bliſters what it may, it is now very generally allowed that the practice of phyſic would be very imperfect without them. They often, by their ſpecific power, give a favourable turn to a diſeaſe, when other methods and medicines fail in giving relief. After previous evacuations,

tions, they are moſt remarkably uſeful for a continued fever, in that ſtage of it when bleeding is unſafe. They are even ſerviceable in pleuriſy, and acute diſeaſes of the lungs, that ſeem to require bleeding.—Heiſter mentions a caſe of inflamed eyes being relieved by a ſmall bliſter on the crown of the head, but that I preſume was after bleeding. De Haen ſays, bliſters often prevent an approaching fit of the ague. We have frequent inſtances of bliſters curing preternatural diſcharges, as catarrh, purging, and hœmorrhages. Nothing more effectually relieves the gouty ſpaſm in the ſtomach, when it is applied to the ſide, or inſide of the arms, or legs, or thighs; but not on the ſtomach itſelf, as the intention is to make a revulſion from the ſeat of pain. In rheumatiſm, ſciatica, anomalous gout, and in critical tumours, they are uſeful in ſtimulating to an expulſion the ſeparated noxious matter, and for preventing a return of it on the blood. Farriers apply a bliſter to a ſprained part of a horſe, and ſay it cures. Bliſters give relief in low nervous fevers. I have ſometimes ſucceeded in the beginning of theſe fevers by bliſters and Rheniſh wine only.

In

In petechial fevers, veſicatories muſt not be applied too ſoon; for, by leſſening the quantity of the ſeroſity of the blood and lymph, the eruption of the puſtules is prevented.

Veſicatories, on the inſide of hydropical ſwelled legs, promote a great diſcharge of ſeroſity; but a gangrene is, in general, the conſequence.

Although bliſters attenuate and reduce the inflammatory, they do not increaſe the putrid diatheſis of the blood; as appears by the writings of ſome of our moſt ſagacious obſervers; ſuch as Whytt, Huxham, Lind, Fothergill, &c. They are found to have great good effect even in that moſt malignant of all febrile diſeaſes, the plague.

Mercurialis was the firſt who introduced bliſters in that formidable diſeaſe. Saxonia and others have ſince confirmed his practice.—Aretæus was the firſt who uſed bliſters in epilepſy, gout, lethargy, apoplexy, foul eruptions on the ſkin, and ſome other chronic diſorders.

When a bliſter is intended to give ſtimulus only, it is removed ſo ſoon as the part becomes rubified; and is renewed alternately utcunque opus

opus ſit. Sinapiſms, however, are moſt commonly employed for this purpoſe; and, when applied to the ſoles of the feet in affections of the brain, as in coma in fever, or in ſtupor, termed anæſtheſia, where the palpitation of the heart and arteries is weak, they have good effect.

As cantharides are apt to inflame and exulcerate the urinary organs, the ſinapiſm is preferable for a long continued ſtimulus. Sinapiſms, by inviting the blood to the ſurface of the body, are called rubificants; but, as their power may be extended ſo far as even to bliſter and diſcharge a ſerous fluid, I hope I may be allowed to arrange them among evacuants.

CHAP. XII.

On Evacuation by Fontanels or Iſſues.

THESE artificial ulcers are of vaſt importance for preſerving from, mitigating, and removing, a variety of bodily infirmities; ſuch as gout, rheumatiſm, leproſy, foul defedations of the ſkin, head-ach, vertigo, lethargy, epilepſy, hœmoptyſis, phthiſis-pul-

monalis, palsy, catarrh, hydrocephalus, hysteria, hypochondria and melancholia. They often cure tooth-ach, sore eyes, sore breasts and old standing ulcers; and, by cleansing the habit of foul inciting particles that induce a preternatural flow of the catamenia, they are very serviceable in cacochimic habits about that period when the menstrua finally cease. Issues not only prevent, but cure. A cold will fly off at an issue: that is to say, those inciting particles will pass off which would cause a phlogosis, or inflammatory disposition. A fever may possibly suppress the discharge which was designed to prevent it; but, when the fever is subdued, the issue will again run and carry off the relicts. Quercetan the Armenian, in his Alexicus Pestis, says, "the medical man, whose office it is to attend on the sick, admirably preserves himself by an issue." Hoffman honours issues with the title of egregia prophylactica; and Diemerbroek, of præstantissima subsidia. It is said an issue is a preservative against infection of the plague. When pestilent buboes and carbuncles inflame, maturate, and discharge a laudable matter, the fever abates, and the morbific matter deposites and passes off.

Ætius,

Ætius, for the bite of a mad-dog, recommends the ulcers to be kept open for the ſpace of fifty or ſixty days; that is, till the virus is ſpent. Celſus, by cupping, and then applying the actual cautery to the wound, ſuppoſed the poiſon might be extracted; and Dr. Boerhaave, for the ſame purpoſe, recommends a continual ſuppuration to be kept up in the part for ſix months.

In the days of Hippocrates and of Celſus, they opened iſſues by cautery for dropſy, arthritis vaga, or flying gout, labriſulcio or tumified lips, epilepſy, conſumption, &c. It was a practice formerly at Montpelier, at Padua, and in Tuſcany, for epilepſy, to cut not only through the integuments of the cranium, but to make an opening by the actual cautery through the ſuture of the ſkull itſelf, for the malignant fume to fly off from the brain, and by that means prevent a return of the fit; but I only mention this to ſhow, that, however crude the opinions of the ancients were in reſpect to the operation, their ideas of the utility of iſſues were always correct.

The ſeton was ſucceſsfully introduced by

Columella, during the plague in the reign of Claudius, until which time the cautery had been uſed in the cure of that diſeaſe. It was ſoon after extended to the epidemic and malignant diſeaſes of horned cattle, and attended alſo in them with ſucceſs.

The ſeton, termed *a rowel*, has long been uſed by farriers whenever a repletion, or a coacervation of humours, required a drain.

The practice of making iſſues is very ancient: Galen, Forreſtus, Ambroſæus Paræus, Glandorpius, Mercurialis, Platerus, Angelus Sala, Rammazzini, Fracaſtorius, and others of the ancients, teſtify their utility in pthiſis, ſcrophula, lepra, lues-venerea, ſcurvy, epilepſy, rickets, cataract, dimneſs, gout, and other affections ſive anticipiendo, ſive curando; and aſſert, thoſe who have either ſpontaneous or artificial ulcers are ſcarce ever known to die of the plague.

The moderns, ſuch as Hildanus and Baglivi, ſpeak highly of the excellence of ſetons in catarrh, phthiſis, hœmoptyſis, &c.

Dr. Willis ſays, "he cured one patient of an obſtinate weakneſs in the loins, and another of

of an inveterate ſciatica, by an iſſue in the groin."

Dr. Sydenham ſays, "the remains of the morbific matter of a rheumatiſm may be eaſily carried off by an iſſue in one of the legs."

Dr. Morton, ſpeaking of iſſues in an original pulmonary conſumption, ſays, "Iſſues in the arms, or between the ſhoulders, are ſerviceable for abating the quantity of the ſerous liquor of the blood, and conſequently for comforting the brain and nerves, and tempering the animal ſpirits, which doubtleſs contribute very much to the extinguiſhing of the hectical flame, and to the prevention of a conſumption."

Dr. Nicholas Robinſon ſays, "when the lungs were oppreſſed with a ropy tough phlegm, or matter, that lies deep and requires great labour in pumping up, I adviſed a couple of iſſues, or ſetons, to be made in the arms, or in each ſide of the breaſt; or between the ſhoulders juſt below the nape of the neck; and it is impoſſible to conceive the benefit I have known to acrue from theſe iſſues, eſpecially when they made a free diſcharge."

Baron Van Sweiten and Ruyſch declare that

that nothing, in their practice, ſucceeded better than iſſues.

Sir John Pringle ſays, "I can freely recommend, from repeated trials, the uſe of ſetons or iſſues on the ſide of the part that is moſt affected."

I imagine it to be of little conſequence where an iſſue is fixed, provided it be in a convenient and ſafe place.

After inoculation for the ſmall-pox, ſome children, whoſe bodies have not been ſufficiently purged, are afterwards tortured with boils and running ſores; for which I have experienced nothing ſo effectual as iſſues, ſea-bathing, and, ſometimes intermediately, drinking ſea-water.

As I have ſeldom had occaſion to preſcribe a doſe of phyſic for a perſon who happened to have an iſſue, even though frequently conſtipated before, I am led to believe an iſſue is efficacious in obviating habitual coſtiveneſs. The ſtimulating purge is only temporary, and does not radically, or effectually, remove the cauſe: an iſſue removes not only the cauſe of conſtipation, but alſo that of laxation.

There

There probably is nothing more difficult in phyſic than to remedy habitual conſtipation, and bring the animal functions to perform their office regularly. If the conſtipated habit is occaſioned by a weakened tone of the inteſtines, Pyrmont, Tunbridge, or other chalybeate waters, if drank daily for ſome weeks, will be very efficacious; but if the cauſe of the conſtipation is a defect in ſecretion, or a hot temperament of the blood and depending juices, refrigerating alterants and an iſſue will be neceſſary. From theſe I have repeatedly ſeen very happy effects.

By many practitioners, the potential cautery or cauſtic is, at this time, preferred to every other method of opening an iſſue. This, however, depends on the part where the iſſue is to be fixed.

The idea of an iſſue is apt to terrify and diſguſt; but, when properly managed, it is neither painful to the moſt tender, nor offenſive to the moſt delicate: if, however, the pea, or cord, or acrid matter, ſhould ever happen to irritate and inflame the part, the pain ought to be patiently endured, as the ſtimulus is a ſalutary one, and promotes the diſcharge.

Some

Some gentlemen are afraid of recommending iſſues, leſt they ſhould weaken the patient; but my experience warrants me in ſaying, that, on the contrary, they ſtrengthen, by drawing off that which keeps the body weak. In the courſe of a long, and, I may ſay, a ſucceſsful practice, I have preſcribed iſſues to all ages, from childhood to threeſcore and upward, but never could diſcover they had any ill effect. Indeed, I remember once having a patient whoſe blood was ſo much impoveriſhed by neceſſitous poor low diet, that I found it indiſpenſible to cloſe the iſſue rather haſtily; but after ſhe had been comforted with a more generous and plentiful diet for ſome months, the iſſue was renewed with advantage.

The fontanel relieves the genus nervoſum, evacuates morbid ſerum, leſſens repletion, tempers the maſs of blood, and promotes digeſtion, concoction, nutrition, ſecretion, and excretion. It alſo clears the ſkin of foul defedations, and brightens the complexion.

But, however beneficial iſſues may be, poſt conceptionem, and during pregnancy, in preventing miſcarriage by relieving the habit of that which occaſions weakneſs, yet, while the power

power of conception is retained they are not to be preſcribed for a married woman. . . . . This is an obſervation which ariſes from a long and cloſe attention to the effects of iſſues.

Miſcarriages, in general, are occaſioned by frights, in ~~the~~ weak and irritable habits ~~and~~, are often ſo violent as not only to bring on deliquium, but convulſions, and the moſt alarming ſymptoms, if not *death*. If a flooding comes on, aſtringents have no effect on the uterus, till the fœtus and ſecundines are expelled, when they immediately become unneceſſary, becauſe the hœmorrhage ſtops ſpontaneouſly. Exerciſe, diet, tonic ſtrengtheners and tranquillity are neceſſary to prevent a miſcarriage

The danger of precipitately drying up an iſſue, by which Nature has been invited and habituated to throw off the noxious humours that offended her, may be no leſs fatal in its conſequence than a ſudden obſtruction to any diſcharge by her own efforts: for, in either caſe, the matter, which is morbid, would fall back upon the habit: but no ſuch effect enſues from it drying up of itſelf, without neglect, and after it has for ſome time diſ-

charged a laudable matter; for the habit is then as ſecure as if the indiſpoſition had terminated by a ſpontaneous critical abſceſs, which the fontanel, or iſſue, was originally deſigned to imitate. It however may, now and then, be neceſſary to take a gentle doſe of phyſic, till the body is perfectly regular in her motions, and the determination is led off from the artificial channel.

The common iſſue that is preſerved by a pea is the eaſieſt; and, as its effects are ſimilar to others, it therfore is moſt generally uſed, and is particularly well adapted for children. Iſſues made by the actual or potential cautery produce happy effects, where the great and ſudden diſcharge is required.

Moxa, or Indian moſs, the boaſt of China and Japan, as a ſpecific for gout, epilepſy, colic, head-ach, tooth-ach, madneſs, &c. is a ſoft, woolly, cauſtic herb, a ſpecies of mugwort, which they prepare and lay on the part affected, where it is ſuffered to burn for a few minutes, but not through the ſkin; to effect which, it is lighted ſucceſſively till the heat has deſtroyed the force of the morbific matter; as the actual cautery is ſaid to cure the bite

bite of the viper, or mag-dog, by deſtroying the texture of the part; and, if any virus ſhould ſtill remain, by allowing it to run off by the ſore. A warm cabbage, leek or colts-foot leaf is then laid on the eſchar, which falls off the next day, when there appears a thick matter like pus or lard. The part is afterwards, by this means, kept open, to allow a diſcharge from the habit to purify the blood.

If the iſſue by moxa is really capable of accompliſhing the cure of thoſe great and ſtubborn diſorders, I apprehend it muſt be effected when it is uſed at an early ſtage; for, though an iſſue may prove ſerviceable in an advanced ſtage of a chronic diſeaſe, by leſſening its force, and enabling the ſtomach and the chylopoëtic organs to perform their functions more regularly, yet the great and permanent cure cannot be expected from it unleſs the iſſue is made before the diſeaſe has firmly rivetted itſelf in the vital principles of the conſtitution.

Two of my patients, between forty and fifty, before they had iſſues, were long and ſeverely afflicted by the gout. They have had

them almoſt ſeven years, and received ſo much benefit as to imagine themſelves cured.

A Gentleman, between ſixty and ſeventy, of a full corpulent habit, who happened to have two or three ſlight apoplectic ſtrokes, had an iſſue, or rather two large ones, made between the ſhoulders, by the advice of his Phyſician, and he has lived ten years ſince in excellent health. He was firſt plentifully evacuated. The iſſue, by evacuating gradually, allows the relaxed veſſels of the brain, after great diſtenſion, to recover their priſtine tone.

Thus, without quoting the authorities of many other very eminent Phyſicians and Surgeons, I preſume I have ſufficiently united the teſtimonies of the ancients and moderns, with the experience of my own practice, to eſtabliſh the neceſſity of a much more general uſe of iſſues than has hitherto obtained.

CHAP. XIII.

On Evacuation by Sternutatories and Errhines.

THESE incentives to ſneezing differ only in their degree of ſtrength and power of action. They

They are intended to purge off the redundant ſtagnated lymph from the anterior part of the head.

When errhines, ſuch as thoſe of the cephalic herbs, or tobacco, are inſufficient, and a more violent ſhock is neceſſary to be given to the ſyſtem than theſe can produce, ſternutatories, ſuch as hellebore, elaterium, euphorbium, turbith mineral, or ſternutatory powder of the diſpenſatories are requiſite.

Sternutatories, by promoting expectoration, and ſometimes a ptyaliſm, are ſerviceable in humoral aſthma, and other pectoral complaints. By inciting excretions from the brain, they are beneficial in comatous, paralytic and apoplectic affections: and alſo in thoſe caſes where the nerves are remiſs or defective; for they facilitate the ſecretion of the animal ſpirits. It however muſt be obſerved, that the abuſe or, which is exactly the ſame thing, the too frequent uſe of ſtrong ſternutatories, deſtroy the nervous power, and thereby bring on the moſt diſmal ſymptoms: ſuch as headach, ſtupor, deafneſs, blindneſs, weakneſs of memory, convulſions, and involuntary excretions. Sternutation or ſneezing relieves ſingultus

gultus or hiccup, by exciting a contrary motion. It promotes the birth, by contracting the diaphragm and muſcles of the lower belly; but it is unſafe in inflamed eyes, fractured ribs, rupture, &c.

Some Phyſicians, on the idea that ſneezing is a favourable ſymptom, have endeavoured by ſternutatories to rouſe the faculties of their expiring patients. In ſome diſeaſes, ſneezing is alſo an indication of death.

Tobacco-ſnuff is the errhine in moſt continual uſe; but the powder of the common cephalic herbs is better adapted for ſome morbid affections of the head, as they convey vigour and energy to the animal functions. The naſty faſhionable uſe of tobacco-ſnuff in Europe, inſtead of ſtimulating a diſcharge of the mucid ſtagnating lymph, becomes familiar to the glandular pituitary membrane, and thereby loſes its ſtimulating power, clogs the frontal ſinuſes and lachrymal ducts, obtunds nervous ſenſation, relaxes and weakens the organs of ſight, deadens the luſtre of the eyes, ſallows the complexion, and has brought on conſumption.

CHAP.

CHAP. XIV.

On Evacuation by Sialogogues and Maſticatories.

THOUGH either of theſe medicines promote a glandular diſcharge by the mouth, they differ in their degree of action and effect on the ſyſtem.—Sialogogues act univerſally; maſticatories, partially. But we have already noticed the powers of the principal ſialogogue, mercury, wherefore we ſhall paſs on to maſticatories: ſuch as pyrethrum, horſe-radiſh, ſtaphyſagria, &c. which, by their pungent ſtimulating quality, diſcharge the oral glands, and thereby become ſerviceable in phlegmatic quinzy, tooth-ach, ſwelling of the gums, lethargy, palſy of the tongue, and obſtructions of the parts which are ſubſervient to deglutition. "Remember, ſays Bacon, maſticatories for the mouth."—Indeed, though nobody can ſuppoſe that the great and permanent cure is to be effected by a mere ſtimulus, yet the maſticatory is nevertheleſs entitled to a place among preſervatives from foul and contagious air, as it prevents

prevents the ſaliva, that is tainted by inſpiration, from paſſing into the habit by deglutition.

Exanthematous or puſtulary fevers, are ſeldom mortal to thoſe in whom a ptyaliſm hath taken place. Theſe fevers rarely terminate by ſweat, but by ſaliva:—a catarrh, by diarrhœa.

Roll-tobacco is a maſticatory. But it is particularly to be obſerved, that the united power of medicine and diet cannot ſupply a waſte or defect of that fine digeſtive fluid ſaliva. The common abſurd habits of trifling with this very powerful exotic, occaſions the abuſe of it to be ſo remarkably pernicious. That which nauſeates, may ſuppreſs hunger, but cannot feed. The apathy that is conſequent to the internal uſe of tobacco, evidently ſhows that the common uſe of it is not natural. By deſcending into the primæ viæ, it perverts the alimental juices, affects the nervous ſyſtem, and brings on, with tremor and paleneſs, ſickneſs, confuſion, vertigo, loſs of memory and ſtupefaction.

The active principles of tobacco are a ſulphur and a penetrating volatile ſalt. By diſtillation it yields an acid phlegm, ſome urinous

ous ſpirit, and much fœtid oil. All the preparations of it are *emetic*.—It is a very active medicine, whether uſed internally or externally. As an external, it is detergent, reſolvent, antiſeptic, vulnerary, and antipeſtilential. It deſtroys cutaneous vermin, but with them the hair. By dropping two drops of the eſſential oil of tobacco on the tongue of a cat, ſhe was thrown into convulſions and killed: ſimilar effects were produced by dropping a few drops of the oil into the vein of another cat, and ſuffering it to mix with the circulating blood. A ſingle drop of the oil of tobacco has cured the tooth-ach *.

The common error of ſmoking tobacco to exceſs, muſt be very prejudicial; for it increaſes thirſt by exhauſting the native moiſture, and that eſpecially of the brain. The ſmoke of our own cephalic herbs, in moſt caſes, is preferable to tobacco: the ſcent is, at leaſt, more grateful to ſome, and leſs offenſive to all. But the ſmoke of tobacco is, by far, the moſt effectual for relieving the full phlegmatic habit; for unloading the head and fauces; for

* *James's Medicinal Dictionary.*

reſolving catarrh, and for promoting expectoration; which ſhows it poſſeſſes great ſalutary, as well as deletery powers; and confirms the neceſſity of theſe remarks, to prevent the indiſcriminate abſurd practice that prevails of ſo much abuſing it, as rather to humour faſhion than to ſatisfy reaſon.... An obſervation that may be applied alſo to the too common mode of injudiciouſly trifling with medicine in general. *Medio tutiſſimus ibus.* I never met with two patients whom I could invariably treat alike.

On the whole, I therefore flatter myſelf, with the hope of having ſo far ſatisfied the judgment of the intelligent Reader, that, for the preſent, I may be permitted to take leave of him in the words of that illuſtrious Roman, Celſus: "Sed purgationes quoque ut interdum neceſſariæ ſunt, ſic ubi frequentes ſunt, periculum afferunt."

THE END